

COLOR TELEVISION

Chassis No. SN-92M

MODEL

36R-S60

In the interests of user-safety (Required by safety regulations in some countries) the set should be restored to its original condition and only parts identical to those specified should be used.

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ELECTRICAL SPECIFICATIONS

POWER INPUT	120V AC 60 Hz
POWER RATING	165W
PICTURE SIZE	3,905cm ² (605sq inch)
CONVERGENCE	Magnetic
SWEEP DEFLECTION	Magnetic
FOCUS	Hi-Bi-Potential Electrostatic
INTERMEDIATE FREQUENCIES	
Picture IF Carrier Frequency	45.75 MHz
Sound IF Carrier Frequency	41.25 MHz
Color Sub-Carrier Frequency	42.17 MHz
	(Nominal)

AUDIO POWER
OUTPUT RATING 3.0W + 3.0W (at 10% distortion and
Dual CH Operate)

SPEAKER
 SIZE 12 x 6 cm (2 pcs.)
 VOICE COIL IMPEDANCE 6 ohm at 400 Hz

ANTENNA INPUT IMPEDANCE
 VHF/UHF 75 ohm Unbalanced

TUNING RANGES
 VHF-Channels 2 thru 13
 UHF-Channels 14 thru 69
 CATV Channels 1 thru 125
 (EIA, Channel Plan U.S.A.)

Specifications are subject to change without prior notice.

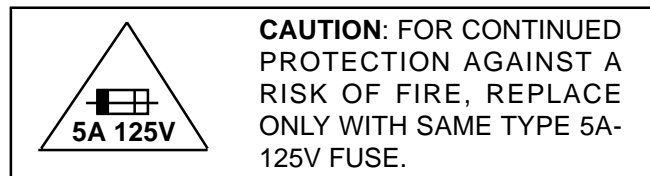
IMPORTANT SERVICE SAFETY PRECAUTION

■ Service work should be performed only by qualified service technicians who are thoroughly familiar with all safety checks and the servicing guidelines which follow:

WARNING

1. For continued safety, no modification of any circuit should be attempted.
2. Disconnect AC power before servicing.
3. Semiconductor heat sinks are potential shock hazards when the chassis is operating.
4. The chassis in this receiver has two ground systems which are separated by insulating material. The non-isolated (hot) ground system is for the B+ voltage regulator circuit and the horizontal output circuit. The isolated ground system is for the low B+ DC voltages and the secondary circuit of the high voltage transformer.

To prevent electrical shock use an isolation transformer between the line cord and power receptacle, when servicing this chassis.



SERVICING OF HIGH VOLTAGE SYSTEM AND PICTURE TUBE

When servicing the high voltage system, remove the static charge by connecting a 10k ohm resistor in series with an insulated wire (such as a test probe) between the picture tube ground and the anode lead. (AC line cord should be disconnected from AC outlet.)

1. Picture tube in this receiver employs integral implosion protection.
2. Replace with tube of the same type number for continued safety.
3. Do not lift picture tube by the neck.
4. Handle the picture tube only when wearing shatterproof goggles and after discharging the high voltage anode completely.

X-RADIATION AND HIGH VOLTAGE LIMITS

1. Be sure all service personnel are aware of the procedures and instructions covering X-radiation. The only potential source of X-ray in current solid state TV receivers is the picture tube. However, the picture tube does not emit measurable X-Ray radiation, if the high voltage is as specified in the "High Voltage Check" instructions.

It is only when high voltage is excessive that X-radiation is capable of penetrating the shell of the picture tube including the lead in the glass material. The important precaution is to keep the high voltage below the maximum level specified.

2. It is essential that servicemen have available at all times an accurate high voltage meter. The calibration of this meter should be checked periodically.
3. High voltage should always be kept at the rated value –no higher. Operation at higher voltages may cause a failure of the picture tube or high voltage circuitry and;also, under certain conditions, may produce radiation in exceeding of desirable levels.
4. When the high voltage regulator is operating properly there is no possibility of an X-radiation problem. Every time a color chassis is serviced, the brightness should be tested while monitoring the high voltage with a meter to be certain that the high voltage does not exceed the specified value and that it is regulating correctly.
5. Do not use a picture tube other than that specified or make unrecommended circuit modifications to the high voltage circuitry.
6. When trouble shooting and taking test measurements on a receiver with excessive high voltage, avoid being unnecessarily close to the receiver. Do not operate the receiver longer than is necessary to locate the cause of excessive voltage.

IMPORTANT SERVICE SAFETY PRECAUTION

(Continued)

BEFORE RETURNING THE RECEIVER

(Fire & Shock Hazard)

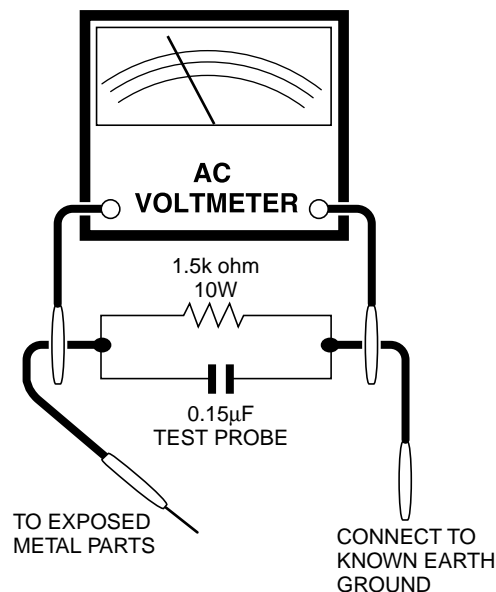
Before returning the receiver to the user, perform the following safety checks.

1. Inspect all lead dress to make certain that leads are not pinched or that hardware is not lodged between the chassis and other metal parts in the receiver.
2. Inspect all protective devices such as non-metallic control knobs, insulating materials, cabinet backs, adjustment and compartment covers or shields, isolation resistor-capacity networks, mechanical insulators, etc.
3. To be sure that no shock hazard exists, check for leakage current in the following manner.
 - Plug the AC cord directly into a 120 volt AC outlet, (Do not use an isolation transformer for this test).
 - Using two clip leads, connect a 1.5k ohm, 10 watt resistor paralleled by a 0.15 μ F capacitor in series with all exposed metal cabinet parts and a known earth ground, such as electrical conduit or electrical ground connected to earth ground.
 - Use an AC voltmeter having with 5000 ohm per volt, or higher, sensitivity to measure the AC voltage drop across the resistor.

- Connect the resistor connection to all exposed metal parts having a return to the chassis (antenna, metal cabinet, screw heads, knobs and control shafts, escutcheon, etc.) and measure the AC voltage drop across the resistor.

All checks must be repeated with the AC line cord plug connection reversed. (If necessary, a non-polarized adapter plug must be used only for the purpose of completing these check.)

Any current measured must not exceed 0.5 milliamp. Any measurements not within the limits outlined above indicate of a potential shock hazard and corrective action must be taken before returning the instrument to the customer.



SAFETY NOTICE

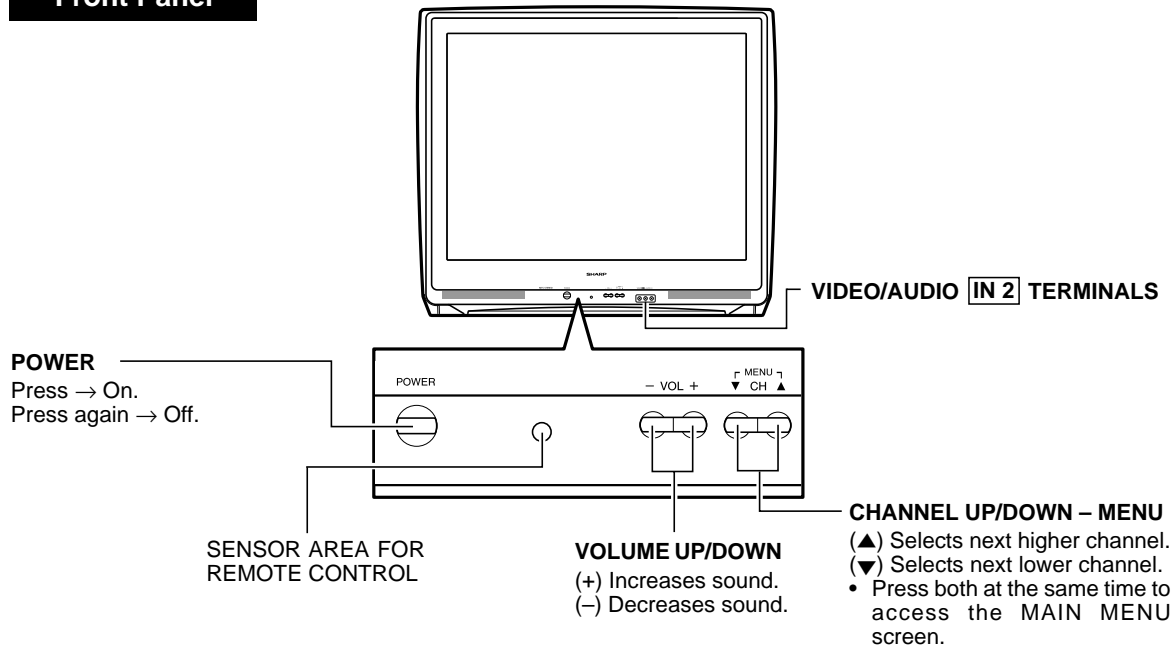
Many electrical and mechanical parts in television receivers have special safety-related characteristics. These characteristics are often not evident from visual inspection, nor can protection afforded by them be necessarily increased by using replacement components rated for higher voltage, wattage, etc.

Replacement parts which have these special safety characteristics are identified in this manual; electrical components having such features are identified by " \triangle " and shaded areas in the Replacement Parts Lists and Schematic Diagrams.

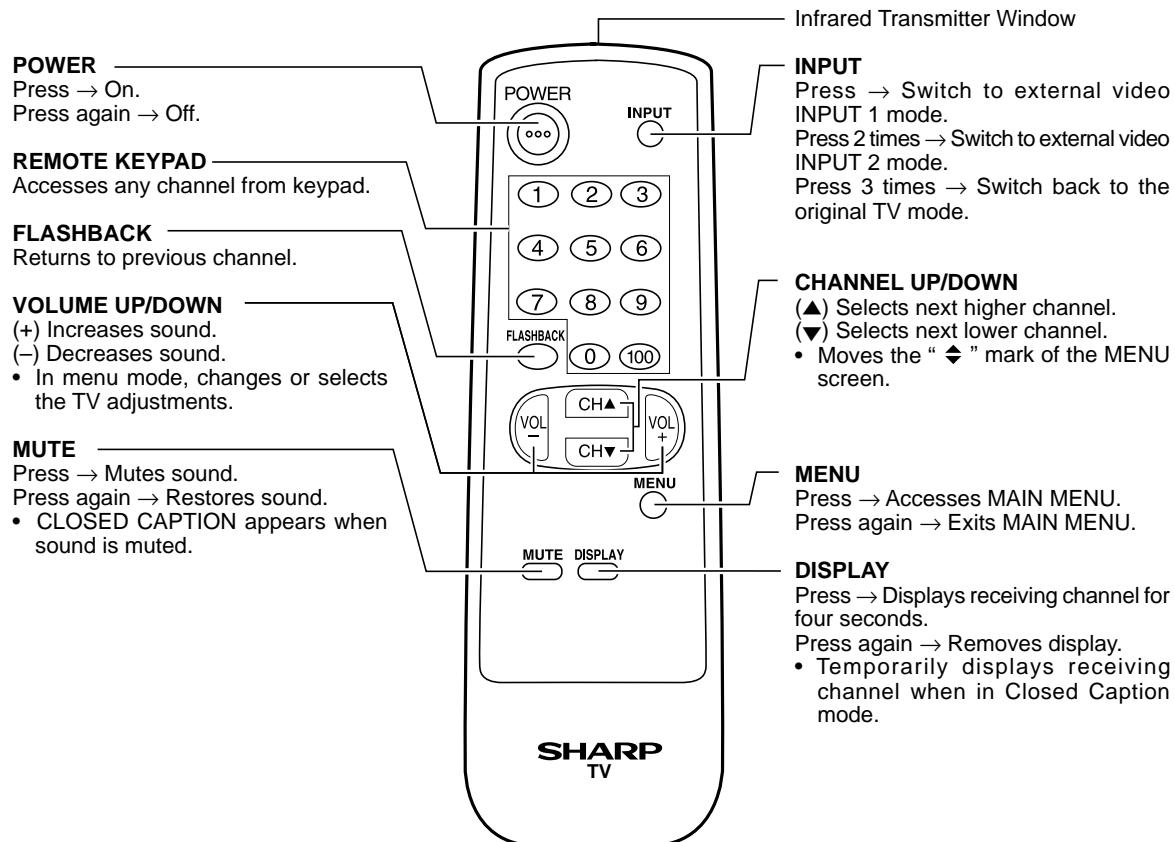
For continued protection, replacement parts must be identical to those used in the original circuit. The use of substitute replacement parts which do not have the same safety characteristics as the factory recommended replacement parts shown in this service manual, may create shock, fire, X-radiation or other hazards.

LOCATION OF USER'S CONTROL

Front Panel



Basic Remote Control Functions



INSTALLATION AND SERVICE INSTRUCTIONS

Note: (1) When performing any adjustments to resistor controls and transformers use non-metallic screwdrivers or TV alignment tools.
 (2) Before performing adjustments, the TV set must be on at least 15 minutes.

CIRCUIT PROTECTION

The receiver is protected by a 5.0A fuse (F701), mounted on PWB-A, wired into one side of the AC line input.

X-RADIATION PROTECTOR CIRCUIT TEST

After service has been performed on the horizontal deflection system, high voltage system, B+ system, test the X-Radiation protection circuit to ascertain proper operation as follows:

1. Apply 120V AC using a variac transformer for accurate input voltage.
2. Allow for warm up and adjust all customer controls for normal picture and sound.
3. Receive a good local channel.
4. Connect a digital voltmeter to TP653 and make sure that the voltmeter reads $13.2 \pm 0.7V$.
5. Apply external 16.2V DC at TP653 by using an external DC supply, TV must be shut off.
6. To reset the protector, unplug the AC cord and plug the AC cord power on. Now make sure that normal picture appears on the screen.
7. If the operation of the horizontal oscillator does not stop in step 5, the circuit must be repaired before the set is returned to the customer.

HIGH VOLTAGE CHECK

High voltage is not adjustable but must be checked to verify that the receiver is operating within safe and efficient design limitations as specified checks should be as follows:

1. Connect an accurate high voltage meter between ground and anode of picture tube.
2. Operate receiver for at least 15 minutes at 120V AC line voltage, with a strong air signal or a properly tuned in test signal.
3. Enter the service mode and select the service adjustment "S19" and Bus data "01" (Y-mute on).
4. The voltage should be approximately 33.4kV (at zero beam).

If a correct reading cannot be obtained, check circuitry for malfunctioning components. After the voltage test, make Y-mute off to the normal mode.

For adjustments of this model, the bus data is converted to various analog signals by the D/A converter circuit.

Note: There are still a few analog adjustments in this series such as focus and master screen voltage. Follow the steps below whenever the service adjustment is required. See "Table-B" to determine, if service adjustments are required.

1. Service mode

Before putting unit into the service mode, check that customer adjustments are in the normal mode. Use the reset function in the video adjustment menu to ensure customer controls are in their proper (reset) position.

2. Service number selection

Once in the service mode, press the Ch-up or Ch-down button on the remote controller or at the set. The service adjustment number will vary in increments of one, from "S01" to "P07". Select the item you wish to adjust.

3. Data number selection

Press the Vol-up or vol-down button to adjust the data number.

To enter the service mode and exit service mode.

While pressing the Vol-up and Ch-up buttons at the same time, plug the AC cord into a wall socket.

Now the TV set is switched on and enters the service mode.

To exit the service mode, turn the television off by pressing the power button.

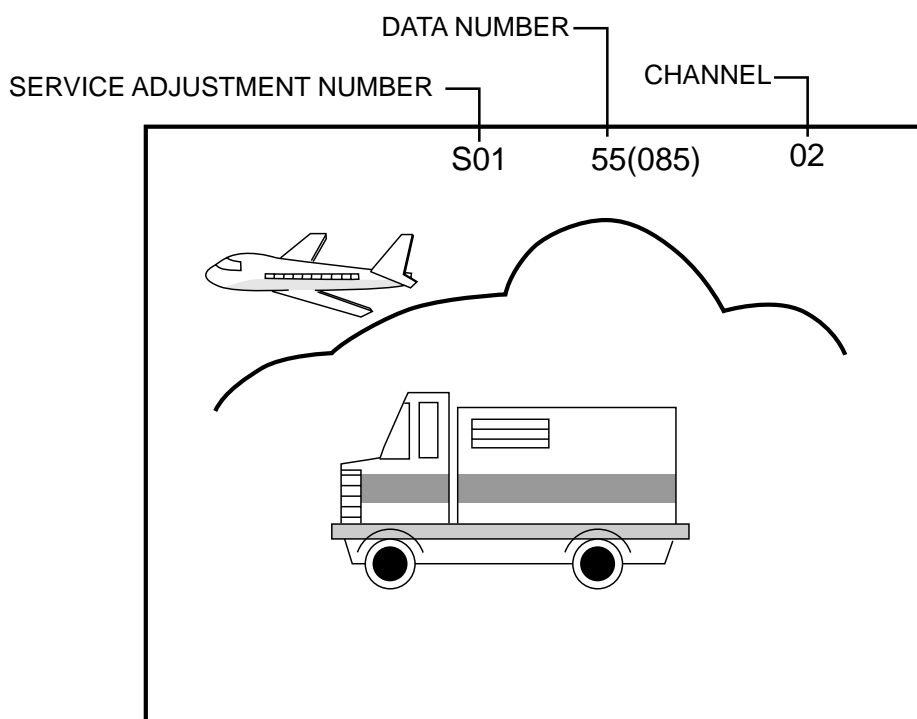


Figure A.

SERVICE NUMBER	ADJUSTMENT ITEM	DATA		ADJUSTMENT CONTENTS
		INITIAL VALUE	RANGE	
S01	PICTURE	5E	00-7F	Must be set to "24" Must be set to "00"
S02	TINT	46	00-7F	
S03	COLOUR	32	00-7F	
S04	BRIGHTNESS	40	00-7F	
S05	SHARPNESS	28	00-3F	
S06	Vert. PHASE	00	00-07	
S07	Hor. PHASE	12	00-1F	
S08	RF AGC	23	00-3F	
S09	Vert. AMPLITUDE	20	00-3F	
S10	PIF VCO	2C	00-7F	
S11	R CUT-OFF	00	00-FF	
S12	G CUT -OFF	00	00-FF	
S13	B CUT-OFF	00	00-FF	
S14	G GAIN	7F	00-FF	
S15	B GAIN	7F	00-FF	
S16	TRAP	00	00,01	Must be set to "01"
S17		4B	00-3F	
S18	CC POSITION	17	00-FF	
S19	MUTE	00	00,01,03	"00" : NORMAL, "01" : Y-MUTE, "03" : V-STOP & Y-MUTE
S20	ENERGY SAVE OFFSET	20	00-3F	Must be set to "23"
S21	PERIOD ADJ.	7A	00-FF	Must be set to "7A"
S22	FAO VOLUME STEP	25	00-32	
S23	TUNER	00	00,01	Must be set to "00"
S24	FAV. COLOR RTONE-G	F9	00-FF	
S25	FAV. COLOR RTONE-B	EB	00-FF	
S26	FAV. COLOR BTONE-G	02	00-FF	
S27	FAV. COLOR BTONE-B	08	00-FF	
S28	COLOR TEMP LOW-G	E1	00-FF	
S29	COLOR TEMP LOW-B	AE	00-FF	
S30	COLOR TEMP ML-G	FA	00-FF	
S31	COLOR TEMP ML-B	E7	00-FF	
S32	COLOR TEMP HIGH-G	08	00-FF	
S33	COLOR TEMP HIGH-B	14	00-FF	
OP1	OPTION1	00	00-FF	Must be set to "B1"
OP2	OPTION2	00	00-FF	Must be set to "C7"
M01	INPUT LEVEL	0A	00-0F	
M02	ST VCO	20	00-3F	
M03	FILTER	1C	00-3F	
M04	WIDE BAND	20	00-3F	
M05	SPECTRAL	1B	00-3F	
P01	PIP Y-LEVEL	30	00-7F	
P02	PIP TINT	29	00-3F	
P03	PIP COLOR	2E	00-7F	
P04	PIP Y-OFFSET	09	00-1F	
P05	PIP H-POSITION	0A	00-FF	
P06	PIP BGPM	00	00-0F	
P07	PIP FREERUN	0B	00-0F	

Table - A

Holding down both the VOL-up/CH-down buttons on the TV set at service mode for more than 2 seconds will automatically write the above initial values into IC2101.

PART REPLACED	ADJUSTMENT		NOTES
	NECESSARY	UNNECESSARY	
IC2001		X	Data is stored in IC2101.
IC201	X		The adjustment is needed to compensate for characteristics of parts including IC201 and MTS level (M01).
IC2101	X		Holding down both the VOL-up/CH-down buttons on the TV set in the service mode for more than 2 seconds will automatically write the above initial values into IC2101. Then perform a complete adjustment.
CRT	X		Adjust items related to picture tube only.
IC3001	X		Adjust items related to MTS only (M01~M05).
IC1801	X		Adjust items related to P-IN-P only (P01~P07).

Table - B

■ SERVICE ADJUSTMENT

VCO Adjustment

1. Connect a digital voltmeter between pin (44) of IC201 and ground.
2. Receive a good local channel.
3. Enter the service mode and select the service adjustment "S10".
4. Adjust the data so that digital voltmeter reads 2.2V.
5. Adjustment is completed, remove the voltmeter, return to "normal" mode.

RF AGC Adjustment

1. Receive a good local channel.
2. Enter the service mode and select the service adjustment "S08".
3. Set the data value to point where no noise or beat appears.
4. Select another channel to confirm that no noise or beat appears.

Note 1 : You will have to come out of the service mode to select another channel.

Note 2 : Setting the data to "00" will produce a black raster.

Screen Adjustment

1. Receive a good local channel.
2. Enter the service mode and select the service adjustment "S03" and set the data value to "00" to set the color level to minimum. (Record original data code under adjustment "S03" before changing) You may skip this step, if you selected a B/W picture or monoscope pattern.
3. Select the service adjustment "S19" and adjust the data value to "01", this turn off the luminance signal (Y-mute).
4. Select the service adjustment "S04" and adjust data value to "4B".
5. Adjust the master screen control until the raster darkens to the point where raster is barely seen.
6. Adjust the service adjustments "S11" red, "S12" green and "S13" blue to obtain a good grey scale with normal whites at low brightness level.
7. Select the service adjustment "S19" and reset data to "00". Select the service adjustment "S03" and reset data to obtain normal color level.
8. Reset the master screen control to obtain normal brightness range.

White Balance Adjustment

1. Receive a good local channel.
2. Enter the service mode and select the service adjustment "S03" and set to "00" (minimum color)(Record original data code under adjustment "S03" before changing). "S03" does not have to be adjusted, if you selected a B/W picture or monoscope pattern.
3. Alternately adjust the service adjustment data of "S14" and "S15" until a good grey scale with normal whites is obtained.
4. Select the service adjustment "S03" and adjust data to obtain normal color level.

Sub-Picture Adjustment

1. Receive a good local channel.
2. Make sure the customer picture control is set to maximum.
3. Enter the service mode and select the service adjustment "S01".
4. Adjust the data value to achieve normal contrast range.

Sub-Tint Adjustment

1. Receive a good local channel.
2. Set customer tint control to center of it's range.
3. Enter the service mode and select the service adjustment "S02".
4. Adjust "S02" data value to obtain normal flesh tones.

Sub-Color Adjustment

1. Receive a good local channel.
2. Make sure the customer color control is set to center position .
3. Enter the service mode and select service adjustment "S03".
4. Adjust "S03" data value to obtain normal color level.

Sub-Brightness Adjustment

1. Receive a good local channel.
2. Make sure the customer brightness control is set to center position.
3. Enter the service mode and select the service adjustment "S04".
4. Adjust "S04" data value to obtain normal brightness level.

Vertical-Size and Linearity Adjustments

1. Receive a good local channel.
2. Enter the service mode and select the service adjustment "S09".
3. While observing the top and bottom of the screen, adjust "S09" data value to proper vertical size.
4. Using the R502 control adjust for the best linearity.

Vertical Phase Adjustment

1. Enter the service mode and select the service adjustment "S06".
2. Adjust data value to "00".
Note: This must be set "00" when changed data retrace line will appear.

Horizontal Position Adjustment

1. Receive a good local channel.
2. Enter the service mode and select the service adjustment "S07".
3. Adjust "S07" data value so that picture is centered.

Caption Position Adjustment (Horizontal)

1. Receive a good local channel.
2. Enter the service mode and select the service adjustment "S18".
3. A black text box appears on the screen. (see **Figure B.** below)
4. Adjust "S18" data value so that text box is positioned in the center of the screen.

3.58MHz Trap Adjustment

1. Receive a good local channel.
2. Enter the service mode and select the service adjustment "S16".
3. This is a two position adjustment, "00" is ON, "01" is OFF.
4. Adjust data value to "01" for normal viewing.

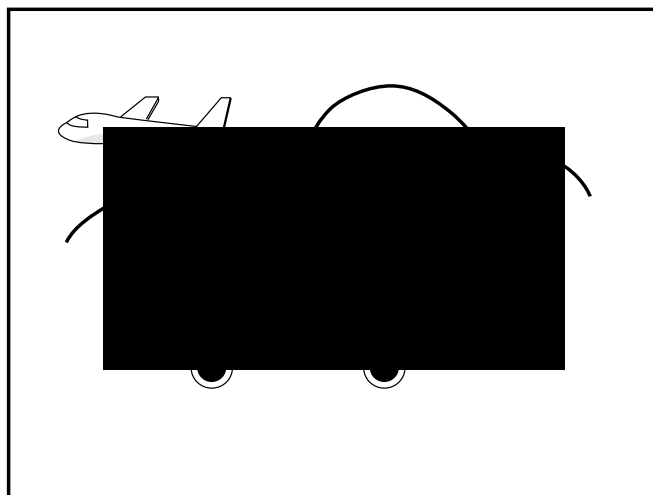


Figure B.

Sharpness and Audio Balance Adjustments

1. Receive a good local channel.
2. Enter the service mode and select the service adjustments "S05" for sharpness and "S17" for audio balance.
- **Sharpness Adjustment**
3. Adjust data value to "24"(center of data range) for sharpness adjustment.
- **Audio Balance Adjustment**
4. Adjust data value to "20"(center of data range) for Audio balance adjustment.

Vertical Center Adjustment

1. Receive a good CATV channel.
2. Adjust the S502 so that the picture is centered.

Side Pincushion Adjustment

1. Receive a good CATV channel or crosshatch pattern signal.
2. Adjust the R676 so that the outermost line on the screen is straight.

Horizontal Size Adjustment

1. Receive a good CATV channel or crosshatch pattern signal.
2. Adjust the R678 so that the best horizontal size.

Energy Save Offset Adjustment

1. Enter the service mode and select the service adjustment "S20".
2. Adjust data value to "23".

Note : This position is used to preset the level for the energy save function.

Other Adjustments

1. Enter the service mode.
2. Adjust the following data values as listed below.

SERVICE POSITION	ADJUST ITEM	DATA (Hex)
S05	SHARPNESS	24
S06	V-PHASE	00
S16	TRAP	01
S20	E-SAVE	23
S21	TIMER	7A
S22	FAO	25
S23	TUNER SETUP	00
S28	COL. TEMP. LOW-G	E1
S29	COL. TEMP. LOW-B	AE
S30	COL. TEMP. ML-G	FA
S31	COL. TEMP. ML-B	E7
S32	COL. TEMP. ML-B	08
S33	COL. TEMP. HIGH-G	14

SERVICE POSITION	ADJUST ITEM	DATA (Hex)
OP1	OPTION1	B1
OP2	OPTION2	C7

■ MTS ADJUSTMENT

MTS Level Adjustment

1. Feed the following monaural signal to pin (14) of IC3001.
Monaural signal : 300Hz, 245mVrms
2. Connect the rms voltmeter to pin (39) of IC3001.
3. Enter the service mode and select the service adjustment "M01".
4. Adjust the data so that the rms voltmeter reads 490 ± 10 mVrms.

MTS VCO Adjustment

1. Keep the unit in no-signal state.
2. Connect the frequency counter to pin (39) of IC3001.
3. Connect a capacitor (100 μ F, 50V) in between positive(+) side of C3005 and ground.
4. Enter the service mode and select the service adjustment "M02".
5. Adjust the data so that the frequency counter reads 62.94 ± 0.75 kHz.

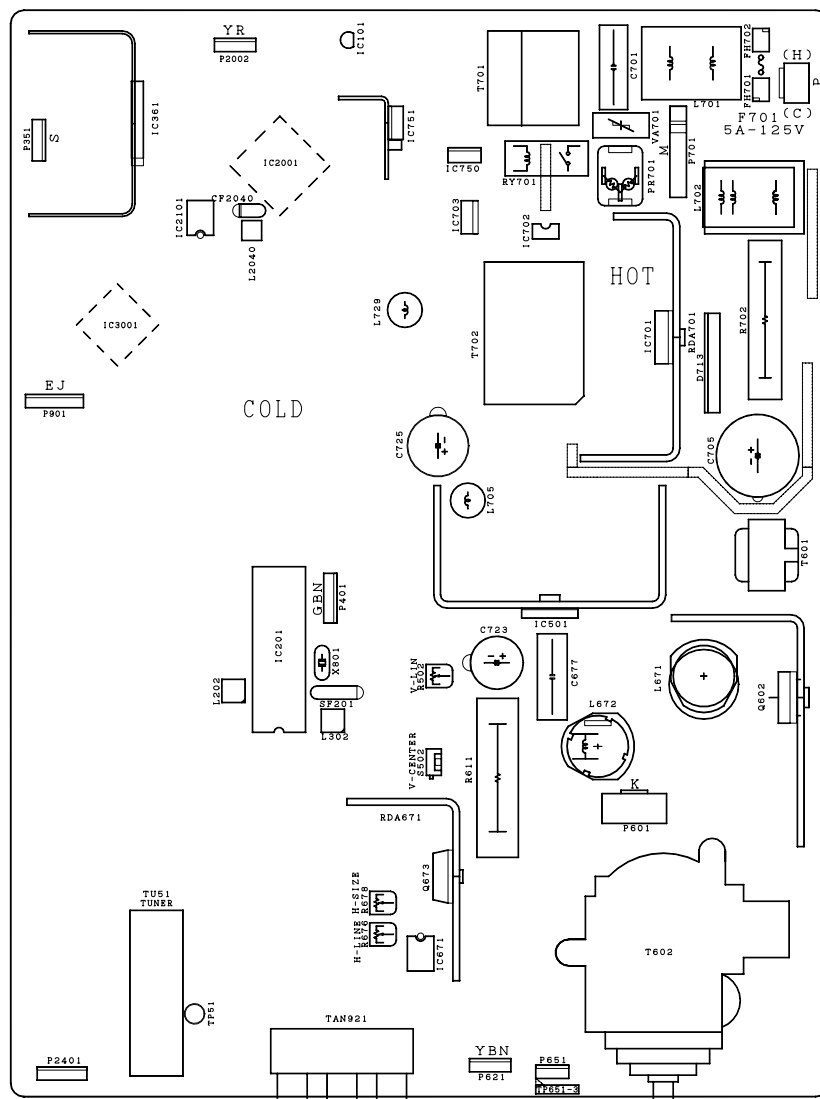
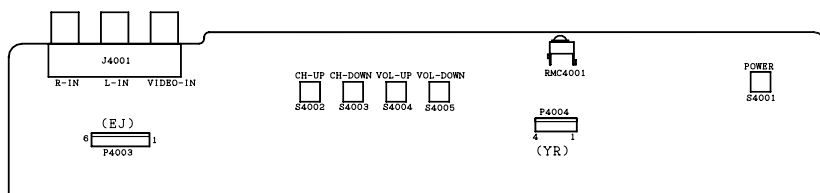
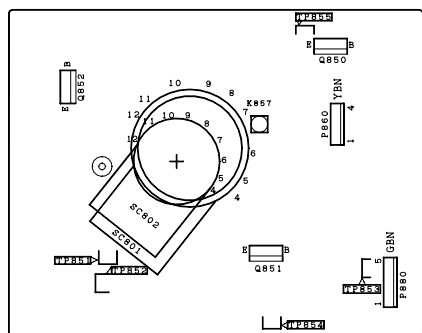
Filter Adjustment

1. Feed the following stereo pilot signal to pin (14) of IC3001 .
Stereo pilot signal: 9.4kHz, 600mVrms.
2. Enter the service mode and select the service adjustment "M03".
3. Adjust the data until "OK" appears in position on the screen. Make sure the "OK" is displayed almost at the center of the data range.

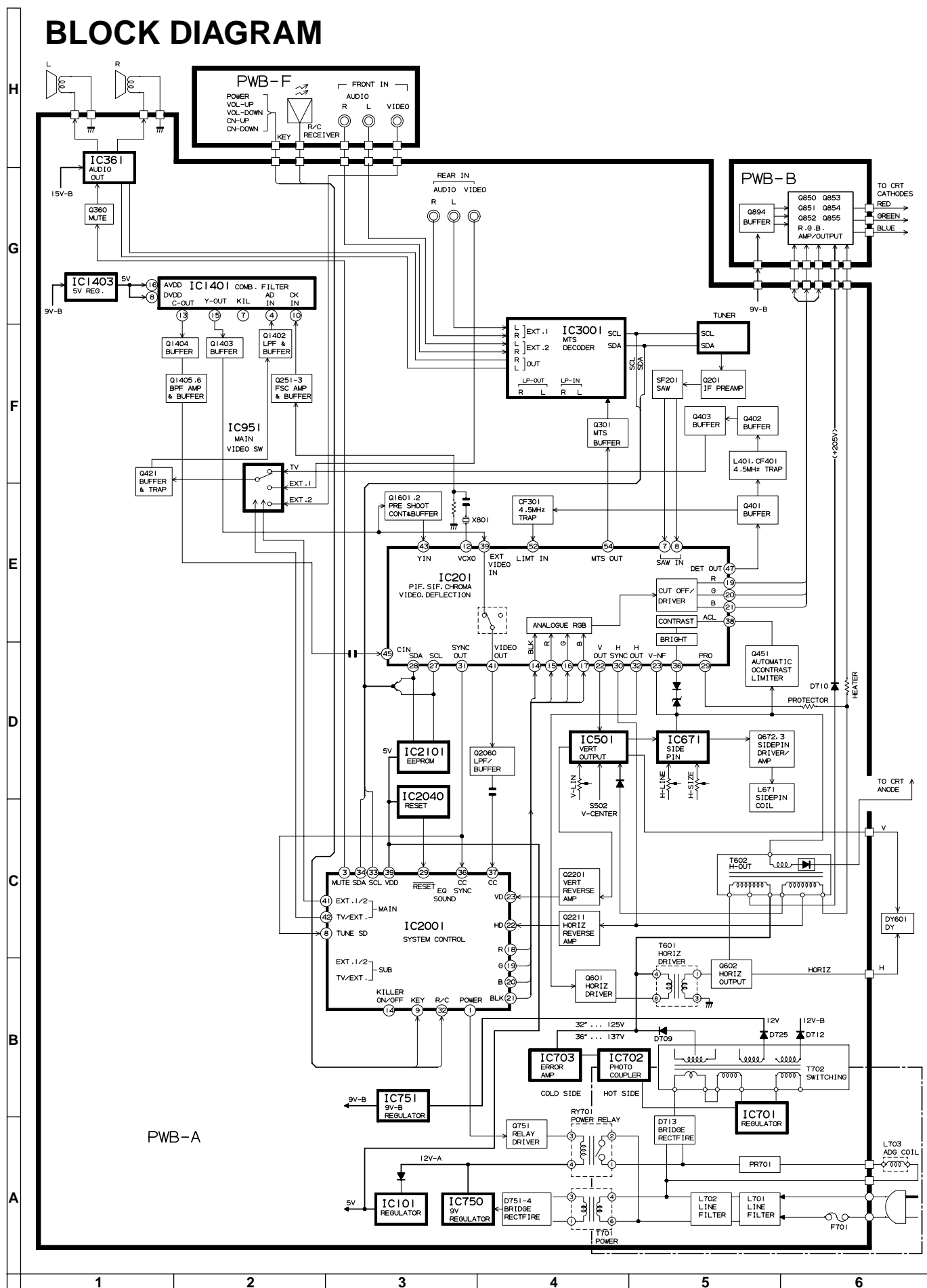
Separation Adjustment

1. Connect the rms voltmeter to pin (39) of IC3001.
2. Receive the following composite stereo signal 1.
Composite stereo signal: 30% modulation, left channel only, noise reduction on, 300Hz
3. Enter the service mode and select the service adjustment "M04".
4. Adjust the data until the AC voltage reading of the RMS voltmeter is minimum.
5. Receive the following composite stereo signal 2.
Stereo signal: 30% modulation, left channel only, noise reduction on, 3kHz
6. Enter the service mode and select the service adjustment "M05".
7. Adjust the data until the AC voltage reading of the rms voltmeter is minimum.
8. Take the above steps 1 thru 7 again for fine adjustment.

A



BLOCK DIAGRAM



DESCRIPTION OF SCHEMATIC DIAGRAM


NOTES:


1. The unit of resistance "ohm" is omitted.
($K=k\Omega=1000\Omega$, $M=M\Omega$)
2. All resistors are 1/8 watt, unless otherwise noted.
3. All capacitors are μF , unless otherwise noted.
($P=pF=\mu\mu F$)
4. (G) indicates $\pm 2\%$ tolerance may be used.
5. $\overline{\text{---}}$ indicates line isolated ground.

VOLTAGE MEASUREMENT CONDITIONS:

1. All DC voltages are measured with DVM connected between points indicated and chassis ground, line voltage set at 120V AC and all controls set for normal picture unless otherwise indicated.
2. All voltages measured with 1000 μV B & W or Color signal.

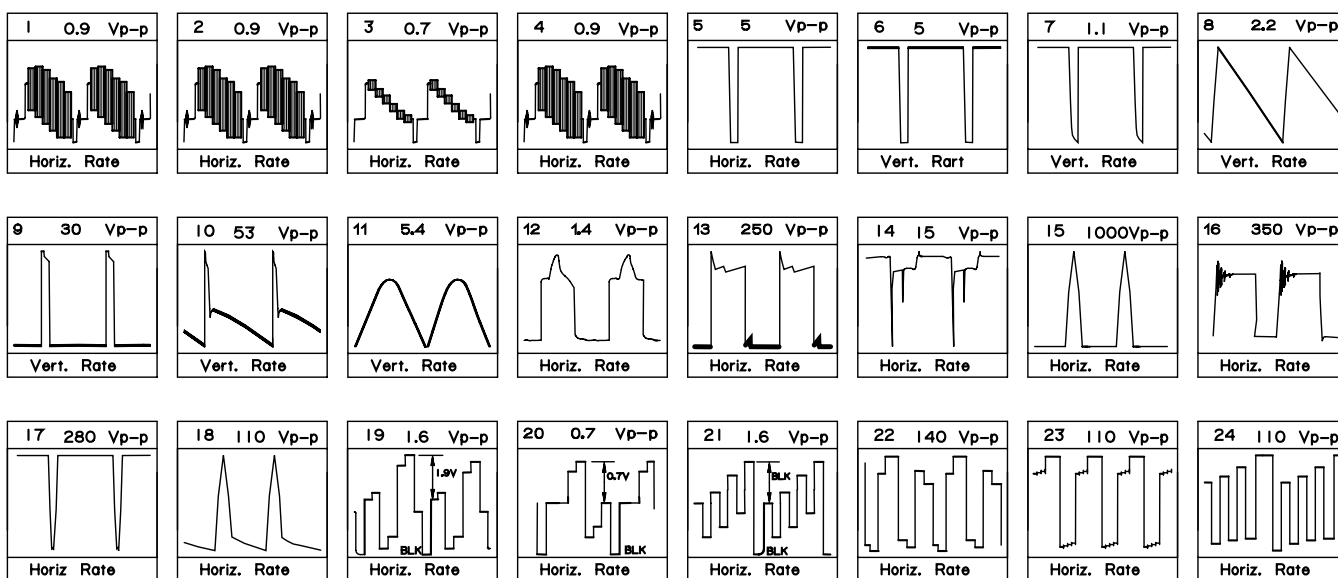
WAVEFORM MEASUREMENT CONDITIONS:

1. Photographs taken on a standard gated color bar signal, the tint setting adjusted for proper color. The wave shapes at the red, green and blue cathodes of the picture tube depend on the tint, color level and picture control.
2.  indicates waveform check points (See chart, waveforms are measured from point indicated to chassis ground.)

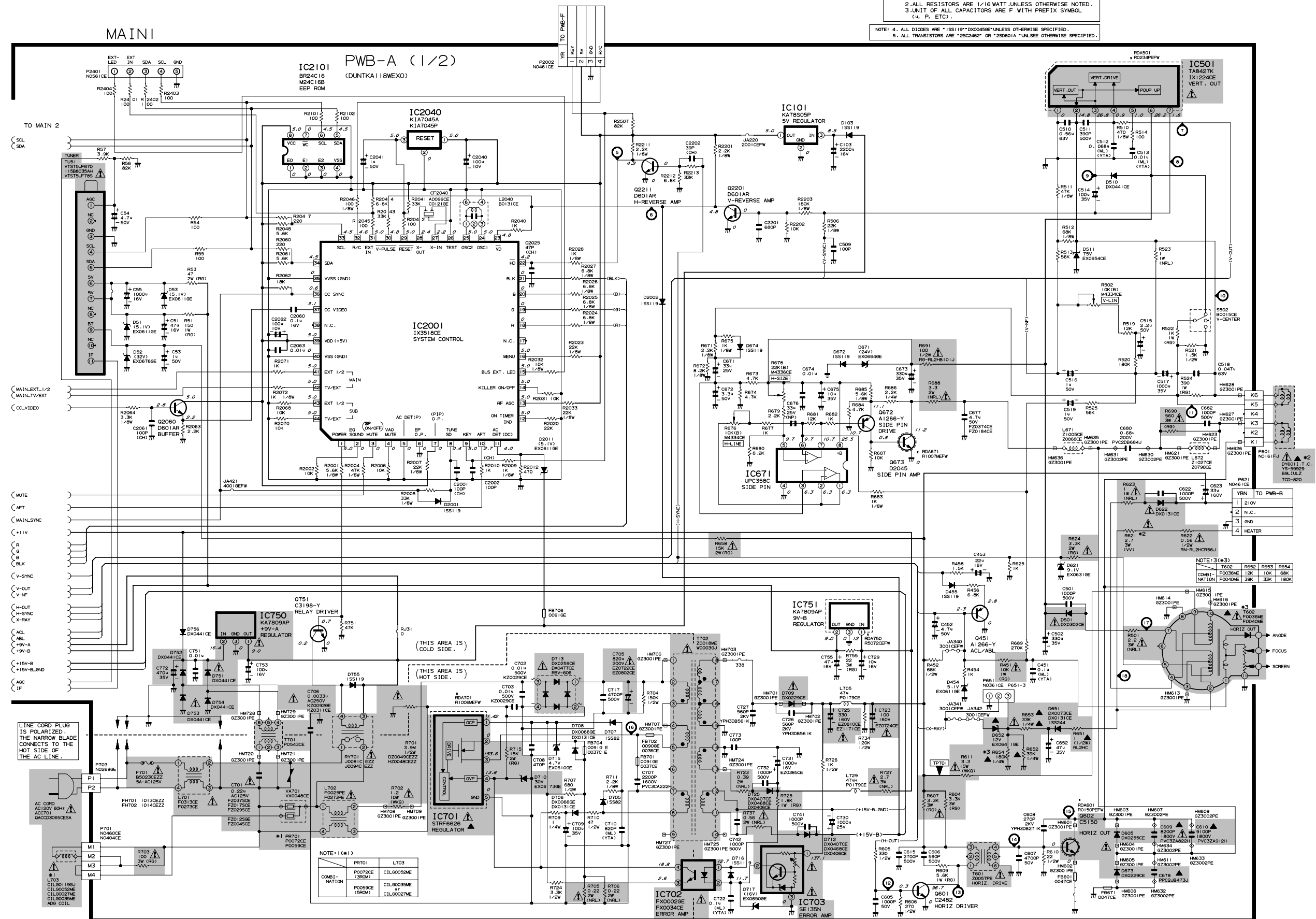
 AND SHADED () COMPONENTS
= SAFETY RELATED PARTS.
 MARK= X-RAY RELATED PARTS.

This circuit diagram is a standard one, printed circuits may be subject to change for product improvement without prior notice.

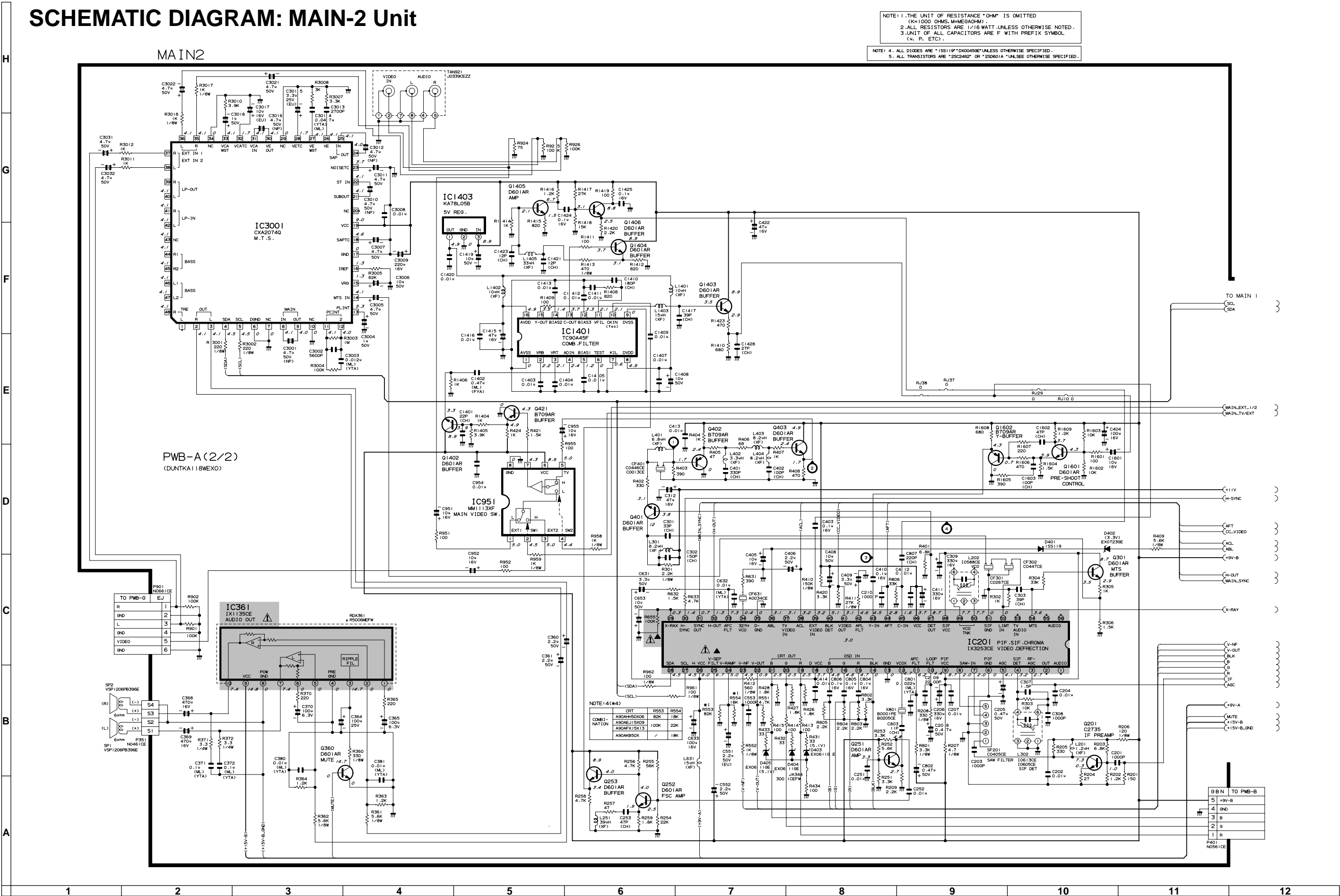
WAVEFORMS



SCHEMATIC DIAGRAM: MAIN-1 Unit



A	B	C	D	E	F	G	H
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SCHEMATIC DIAGRAM: CRT Unit

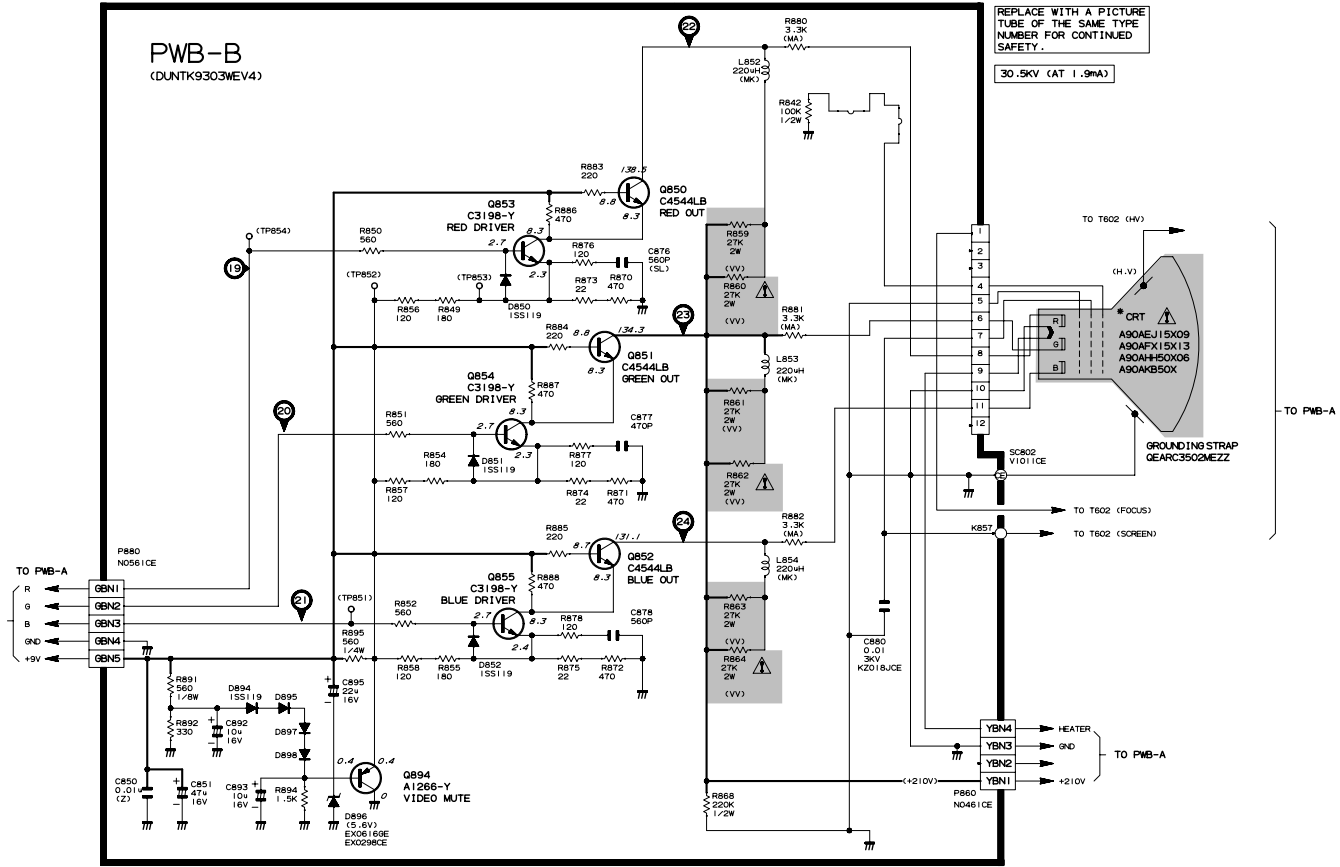
H
G
F
E
D
C
B
A

CRT

PWB-B
(DUNT9303MEV4)

- NOTE: 1. THE UNIT OF RESISTANCE "OHM" IS OMITTED (K=1000 OHMS, M=MEGOHM).
2. ALL RESISTORS ARE 1/8WATT, UNLESS OTHERWISE NOTED.
3. ALL CAPACITORS ARE UF, UNLESS OTHERWISE NOTED (P=μUF).
NOTE: ALL DIODES ARE 1SS119, UNLESS OTHERWISE SPECIFIED.

REPLACE WITH A PICTURE
TUBE OF THE SAME TYPE
NUMBER FOR CONTINUED
SAFETY.
30.5KV (AT 1.9mA)



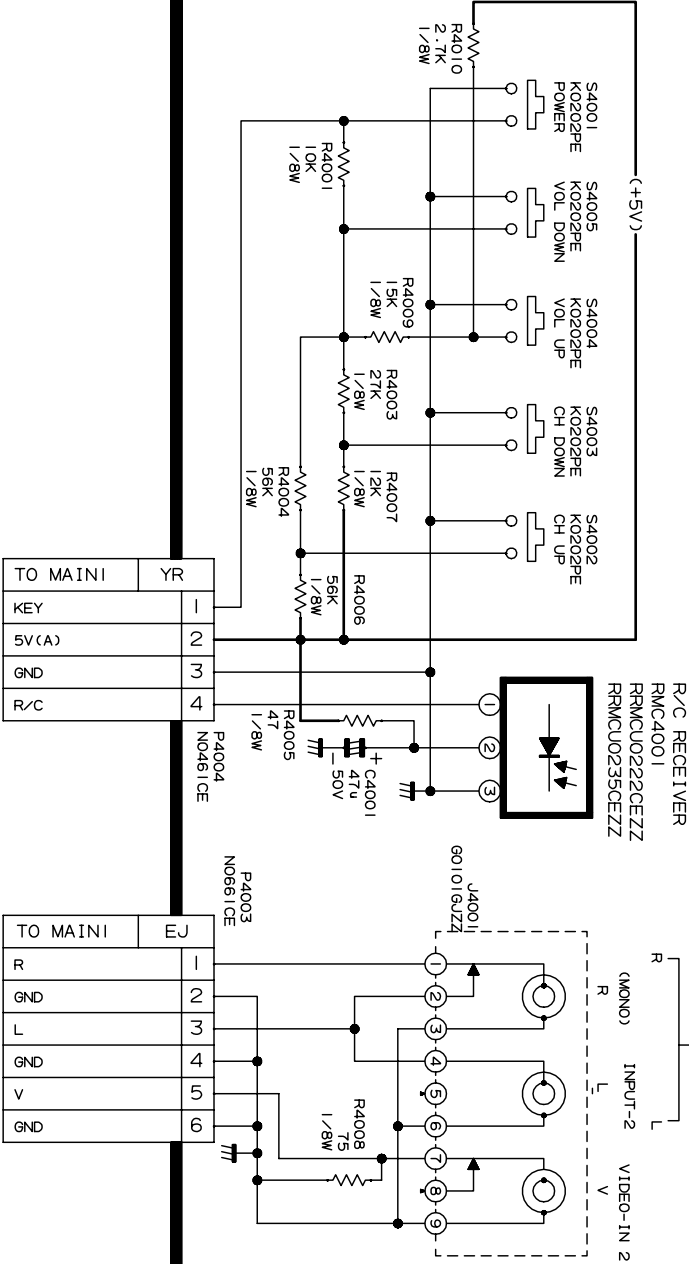
*NOTE

	CRT	DY	R821	R822
COMP-NATION	A90AH50X	YC43THB	2.7/3W	0.56 1/2W
	A90AEJ15X	89L1ULZ	2.2/3W	0.56 1/2W
	A90AFX15X	89L1ULP	2.7/3W	0.27 1/2W
	A90LPY30X	TCD-820	2.7/3W	0.27 1/2W
	A90AKB50X	TCD-820	5.6/1W	0.56 1/2W

SCHEMATIC DIAGRAM: CONTROL Unit

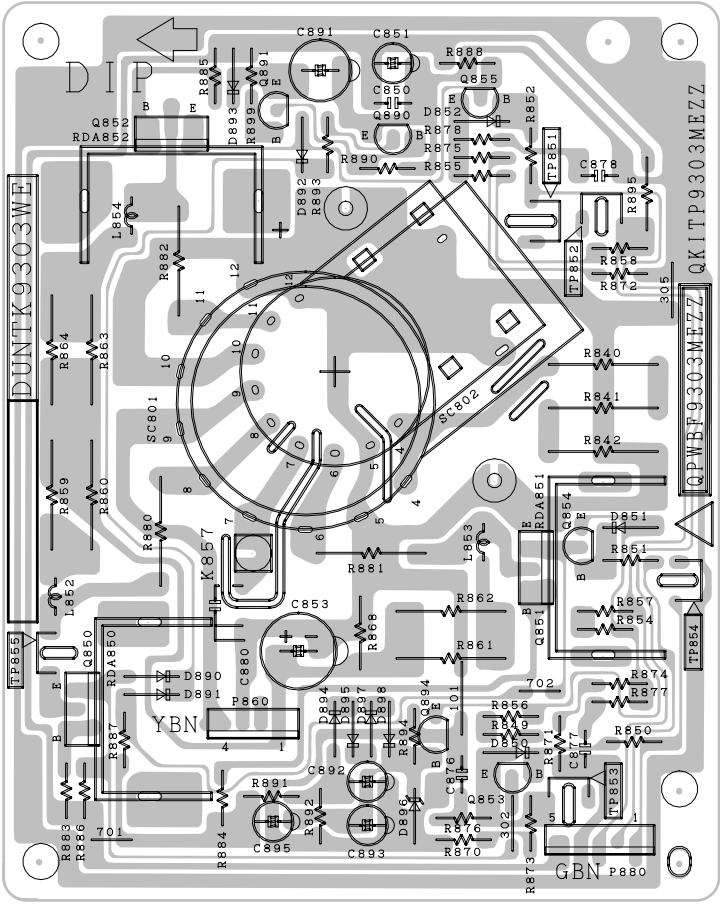
CONTROL

PWB-F
(DUNITKBO23WEAO)

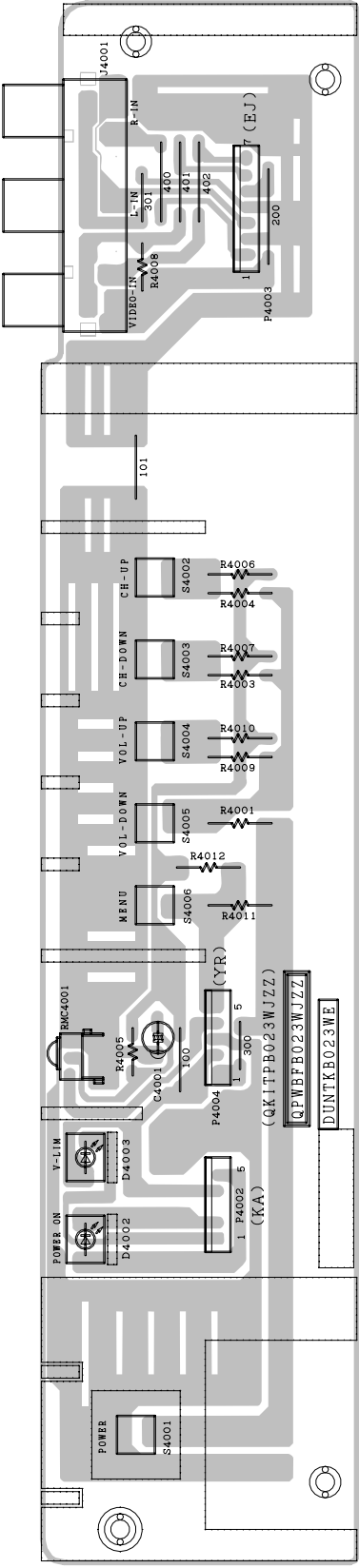




A
B
C
D
E
F
G
H



PWB-B: CRT Unit (Wiring Side)



PWB-F: CONTROL Unit (Wiring Side)

PARTS LIST

PARTS REPLACEMENT

Replacement parts which have these special safety characteristics identified in this manual; electrical components having such features are identified by Δ and shaded areas in the Replacement Parts Lists and Schematic Diagrams. The use of a substitute replacement part which does not have the same safety characteristic as the factory recommended replacement parts shown in this service manual may create shock, fire or other hazards.

"HOW TO ORDER REPLACEMENT PARTS"

To have your order filled promptly and correctly, please furnish the following informations.

- | | |
|-----------------|----------------|
| 1. MODEL NUMBER | 2. REF. NO. |
| 3. PART NO. | 4. DESCRIPTION |

in **USA**: Contact your nearest SHARP Parts Distributor to order.
For location of SHARP Parts Distributor, Please call Toll-Free; 1-800-BE-SHARP

★ MARK: SPARE PARTS-DELIVERY SECTION

▲ MARK : X- RAY RELATED PARTS

Ref. No.	Part No.	★	Description	Code
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PICTURE TUBE

Δ	VB90AHH5006*S	X	Picture Tube (I.T.C.)	DD
	or			
	VB90AEJ1509*S			
	or			
	VB90AFX1513*S			
Δ L703	RCiLG0119GJZZ	X	Degaussing Coil	AT
	or			
	RCiLG0052MEZZ			
	or			
	RCiLG0027MEZZ			
	or			
	RCiLG0035MEZZ			
	LHLDW1008MEKZ	X	ADG Coil Holder, x5	AE
	MSPRT0002MEZZ	X	Spring for CRT	AE
	QEARC3502MEZZ	X	Grounding Strap	AG

	CRT	DY	R621	R622
COMBI-NATION	A90AHH50X	YC4371HB	2.7/3W	0.56 1/2W
	A90AEJ15X	89L1ULZ	2.2/3W	0.56 1/2W
	A90AFX15X	89L1ULP	2.7/3W	0.56 1/2W
	A90LPY30X	TCD-B20	2.7/3W	0.27 1/2W
	A90AKB50X	TCD-B20	5.6/1W	0.56 1/2W

PRINTED WIRING BOARD ASSEMBLIES (NOT REPLACEMENT ITEM)

PWB-A DUNTKA118WEX0	—	MAIN Unit	—
PWB-B DUNTK9303WEV4	—	CRT Unit	—
PWB-F DUNTKB023WEA0	—	CONTROL Unit	—

Ref. No. Part No. ★ Description Code

PWB-A:DUNTKA118WEX0

MAIN UNIT

TUNER

NOTE: THE PARTS HERE SHOWN ARE SUPPLIED AS AN ASSEMBLY BUT NOT INDEPENDENTLY.

Δ TU51	VTUVTST5UF670	X	Tuner	AX
	or			
	VTU11588035AH			
	or			
	VTUVTST5UF78S			

INTEGRATED CIRCUITS

IC101	VHiKA78S05P-1	J	KIA78S05P	AD
Δ IC201	RH-iX3253CEZZ	J	TA1268AN	AV
Δ IC361	RH-iX1135CEZZ	J	LA4261	AH
Δ IC501	VHiTA8427K/-1	J	TA8427K	AL
	or			
	RH-iX1224CEZZ			
IC671	VHiUPC358C/-1	J	UPC358C	AD
Δ IC701	VHiSTRF66261E	J	STR-F6626	AX
Δ IC702	RH-FX0002GEZZ	J	PS2501-1	AD
	or			
	RH-FX0034CEZZ			
Δ IC703	VHiSE135N/-1	J	SE135N	AG
Δ IC750	VHiKA7809AP-1	J	KIA7809API	AE
IC751	VHiKA7809AP-1	J	KIA7809API	AE
IC951	VHiMM1113XF1E	J	MM1113XFBE	AE
IC1401	VHiTC90A45F-1	J	TC90A45F	AM
IC1403	VHiKA78L05B-1	J	KIA78L05BP	AE
IC2001	RH-iX3518CEZZQ	X	TMPA8700CPF3BG	AT
IC2040	VHiKIA7045A-1	J	KIA7045AP	AE
	or			
	VHiKIA7045P-1			
IC2101	VHiBR24C16/-1	J	I.C.	AL
	or			
	VHiM24C168B/-1			
IC3001	VHiCXA2074Q-1	J	CXA2074Q	AY

TRANSISTORS

You can substitute "VS2SC2462-C-1" for "VS2SD601AR/-1".

Q201	VS2SC2735//1E	J	2SC2735	AC
Q251	VS2SD601AR/-1	J	2SD601AR	AC
Q252	VS2SD601AR/-1	J	2SD601AR	AC
Q253	VS2SD601AR/-1	J	2SD601AR	AC
Q301	VS2SD601AR/-1	J	2SD601AR	AC
Q360	VS2SD601AR/-1	J	2SD601AR	AC
Q401	VS2SD601AR/-1	J	2SD601AR	AC
Q402	VS2SB709AR/-1	J	2SB709AR	AC
Q403	VS2SD601AR/-1	J	2SD601AR	AC
Q421	VS2SB709AR/-1	J	2SB709AR	AC
Q451	VS2SA1266-Y-1	J	2SA1266	AA
Q601	VS2SC2482//1	J	2SC2482	AD
Δ Q602	VS2SC5150//2E	X	2SC5150	AS
Q672	VS2SA1266-Y-1	J	2SA1266-Y	AA
Q673	VS2SD2045//1	J	2SD2045	AL
Q751	VS2SC3198-Y-1	J	2SC3198-Y	AA
Q1402	VS2SD601AR/-1	J	2SD601AR	AC
Q1403	VS2SD601AR/-1	J	2SD601AR	AC
Q1404	VS2SD601AR/-1	J	2SD601AR	AC
Q1405	VS2SD601AR/-1	J	2SD601AR	AC
Q1406	VS2SD601AR/-1	J	2SD601AR	AC
Q1601	VS2SD601AR/-1	J	2SD601AR	AC
Q1602	VS2SB709AR/-1	J	2SB709AR	AC
Q2060	VS2SD601AR/-1	J	2SD601AR	AC
Q2201	VS2SD601AR/-1	J	2SD601AR	AC
Q2211	VS2SD601AR/-1	J	2SD601AR	AC

DIODES

You can substitute "RH-DX0045GEZZ" for "VHD1SS119//1".

D51	RH-EX0611GEZZ	J	Zener Diode, 5.1V	AA
D52	RH-EX0676GEZZ	J	Zener Diode, 32V	AA
D53	RH-EX0611GEZZ	J	Zener Diode, 5.1V	AA
D103	VHD1SS119//1	J	Diode	AB

Ref. No.	Part No.	★	Description	Code								
PWB-A:DUNTKA118WEX0												
MAIN UNIT (Continued)												
D401	VHD1SS119//-1	J	Diode	AB								
D402	RH-EX0723GEZZ	J	Zener Diode, 3.3V	AB								
D403	RH-EX0611GEZZ	J	Zener Diode, 5.1V	AA								
D404	RH-EX0611GEZZ	J	Zener Diode, 5.1V	AA								
D405	RH-EX0611GEZZ	J	Zener Diode, 5.1V	AA								
D454	RH-EX0611GEZZ	J	Zener Diode, 5.1V	AA								
D455	VHD1SS119//-1	J	Diode	AB								
△ D501	RH-DX0302CEZZ	J	Diode	AC								
D510	RH-DX0441CEZZ	J	Diode	AC								
D511	RH-EX0654CEZZ	J	Zener Diode, 75V	AD								
△ D605	RH-DX0255CEZZ	J	Diode	AC								
D621	RH-EX0631GEZZ	J	Zener Diode, 9.1V	AA								
△ D622	RH-DX0131CEZZ	J	Diode	AC								
▲△ D651	RH-DX0073CEZZ	J	Diode	AD								
	or											
	RH-DX0131CEZZ											
	or											
	VHD1SS244//-1											
▲△ D652	RH-EX0641GEZZ	J	Zener Diode, 12V	AA								
D671	RH-EX0664GEZZ	J	Zener Diode, 24V	AA								
D672	VHD1SS119//-1	J	Diode	AB								
△ D673	RH-DX0229CEZZ	J	Diode	AF								
D674	VHD1SS119//-1	J	Diode	AB								
D705	VHD1SS82///1A	J	Diode	AC								
D706	RH-DX0066GEZZ	J	Diode	AB								
	or											
D707	RH-DX0131CEZZ											
D708	VHD1SS82///1A	J	Diode	AC								
	RH-DX0066GEZZ	J	Diode	AB								
	or											
	RH-DX0131CEZZ											
△ D709	RH-DX0229CEZZ	J	Diode	AF								
△ D710	RH-EX0673GEZZ	J	Zener Diode, 30V	AB								
△ D712	RH-DX0407CEZZ	J	Diode	AD								
	or											
	RH-DX0468CEZZ											
	or											
	RH-DX0406CEZZ											
△ D713	RH-DX0259CEZZ	J	Diode	AH								
	or											
	RH-DX0477CEZZ											
D715	RH-EX0610GEZZ	J	Zener Diode, 4.7V	AA								
D716	VHD1SS119//-1	J	Diode	AB								
D717	RH-EX0650GEZZ	J	Zener Diode, 16V	AB								
△ D725	RH-DX0407CEZZ	J	Diode	AD								
	or											
	RH-DX0468CEZZ											
	or											
	RH-DX0406CEZZ											
△ D751	RH-DX0441CEZZ	J	Diode	AC								
△ D752	RH-DX0441CEZZ	J	Diode	AC								
△ D753	RH-DX0441CEZZ	J	Diode	AC								
△ D754	RH-DX0441CEZZ	J	Diode	AC								
D755	VHD1SS119//-1	J	Diode	AB								
D756	RH-DX0441CEZZ	J	Diode	AC								
D2001	VHD1SS119//-1	J	Diode	AB								
D2002	VHD1SS119//-1	J	Diode	AB								
D2011	RH-EX0611GEZZ	J	Zener Diode, 5.1V	AA								
△ VA701	RH-VX0048CEZZ	J	Varistor	AE								
PACKAGED CIRCUITS												
△ PR701	RMPTP0072CEZZ	J	Packaged Circuit	AH								
	or											
	RMPTP0059CEZZ											
X801	RCRSB0001PEZZ	R	Crystal	AL								
	or											
	RCRSB0205CEZZ											
<table><tr><td></td><td>PR701</td><td>LT03</td></tr><tr><td rowspan="3">COMBI-NATION</td><td>P0072CE (3ROM)</td><td>C1LG0052ME</td></tr><tr><td>P0059CE (5ROM)</td><td>C1LG0035ME or C1LG0027ME</td></tr></table>						PR701	LT03	COMBI-NATION	P0072CE (3ROM)	C1LG0052ME	P0059CE (5ROM)	C1LG0035ME or C1LG0027ME
	PR701	LT03										
COMBI-NATION	P0072CE (3ROM)	C1LG0052ME										
	P0059CE (5ROM)	C1LG0035ME or C1LG0027ME										

Ref. No.	Part No.	★	Description	Code														
FILTERS																		
CF301	RFILC0267CEZZ	J	Ceramic Filter	AD														
CF302	RFILC0029TAZZ	J	Ceramic Filter	AD														
CF401	RFILC0446CEZZ	J	Ceramic Filter	AD														
	or																	
	RFILC0013CEZZ																	
CF631	RFILA0034CEZZ	J	Ceramic Filter	AD														
CF2040	RFILA0099CEZZ	J	Ceramic Filter	AE														
	or																	
	RFILC0121GEZZ																	
SF201	RFILC0405CEZZ	J	S.A.W Filter	AH														
COILS																		
L201	VP-XF1R2K0000	J	Peaking 1.2μH	AB														
L202	RCiLi0588CEZZ	J	IF Coil	AF														
L251	VP-XF390K0000	J	Peaking 39μH	AB														
L301	VP-XF8R2K0000	J	Peaking 8.2μH	AB														
L302	RCiLi0613CEZZ	J	IF Coil	AE														
	or																	
	RCiLi0605CEZZ																	
L401	VP-XF6R8K0000	J	Peaking 6.8μH	AB														
L402	VP-XF3R3K0000	J	Peaking 3.3μH	AB														
L403	VP-XF8R2K0000	J	Peaking 8.2μH	AB														
L404	VP-XF8R2K0000	J	Peaking 8.2μH	AB														
L631	VP-XF150K0000	J	Peaking 15μH	AB														
L671	RCiLZ1005CEZZ	J	Coil	AH														
	or																	
	RCiLZ0868CEZZ																	
L672	RCiLZ1027CEZZ	X	Coil	AH														
	or																	
	RCiLZ0798CEZZ																	
△ L701	RCiLF0313CEZZ	J	Coil	AH														
	or																	
	RCiLF0273CEZZ																	
△ L702	RCiLF0025PEZZ	R	Coil	AK														
	or																	
	RCiLF0273PEZZ																	
L705	RCiLP0179CEZZ	J	Coil	AD														
L729	RCiLP0179CEZZ	J	Coil	AD														
L1401	VP-XF100K0000	J	Peaking 10μH	AB														
L1402	VP-XF100K0000	J	Peaking 10μH	AB														
L1403	VP-XF150K0000	J	Peaking 15μH	AB														
L1405	VP-XF330K0000	J	Peaking 33μH	AB														
L2040	RCiLB0131CEZZ	J	Oscillation Coil	AE														
TRANSFORMERS																		
△ T601	RTRNZ0057PEZZ	R	Transformer	AK														
▲△ T602	RTRNF0036MEZZ	X	H-Volt Transformer	AY														
	or																	
	RTRNF0040MEZZ																	
△ T701	RTRNP0543CEZZ	J	Power Transformer	AM														
△ T702	RTRNW0003GJZZ	X	Transformer	AP														
	or																	
	RTRNZ0018MEZZ																	
<table border="1"> <tr> <td></td><td>T602</td><td>R652</td><td>R653</td><td>R654</td></tr> <tr> <td rowspan="2">COMBI-NATION</td><td>F0036ME</td><td>12K</td><td>10K</td><td>68K</td></tr> <tr> <td>F0040ME</td><td>39K</td><td>33K</td><td>180K</td></tr> </table>						T602	R652	R653	R654	COMBI-NATION	F0036ME	12K	10K	68K	F0040ME	39K	33K	180K
	T602	R652	R653	R654														
COMBI-NATION	F0036ME	12K	10K	68K														
	F0040ME	39K	33K	180K														
CONTROLS																		
R502	RVR-M4334CEZZ	J	10k(B) V-Line	AC														
R676	RVR-M4334CEZZ	J	10k(B) H-Line	AC														
R678	RVR-M4336CEZZ	J	22k(B) H-Size	AC														
CAPACITORS																		
<i>[EL... Electrolytic, M-Poly... Metalized Polypro Film]</i>																		
C51	VCEA0A1CW476M	J	47 16V EL.	AB														
C53	VCEA0A1HW105M	J	1.0 50V EL.	AB														
C54	VCEA0A1HW475M	J	4.7 50V EL.	AB														
C55	VCEA0A1CW108M	J	1000 16V EL.	AD														
C103	VCEA0A1CW228M	J	2200 16V EL.	AD														
C201	VCKYCY1HB102K	J	1000p 50V Ceramic	AA														
C202	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA														
C203	VCKYCY1HB102K	J	1000p 50V Ceramic	AA														
C204	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA														

Ref. No.	Part No.	★	Description	Code	Ref. No.	Part No.	★	Description	Code
PWB-A:DUNTKA118WEX0									
MAIN UNIT (Continued)									
C205	VCEA0A1HW474M	J	0.47 50V EL.	AB	C633	VCEA0A1CW107M	J	100 16V EL.	AC
C206	VCEA0A1CW337M	J	330 16V EL.	AC	C652	VCEA0A1VW476M	J	47 35V EL.	AB
C207	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA	△ C653	VCEA0A1HW106M	J	10 50V EL.	AB
C208	VCEA0A1HW474M	J	0.47 50V EL.	AB	C671	VCEA0A1EW336M	J	33 25V EL.	AB
C209	VCKYCY1HB222K	J	2200p 50V Ceramic	AA	C672	VCEACA1HC335J	J	3.3 50V EL.	AC
C210	VCKYCY1HB102K	J	1000p 50V Ceramic	AA	C673	VCEA0A1VW337M	J	330 35V EL.	AD
C251	VCKYCY1HB103K	J	0.01 50V Ceramic	AA	C674	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA
C252	VCKYCY1HB103K	J	0.01 50V Ceramic	AA	C675	VCEA0A1VW106M	J	10 35V EL.	AB
C253	VCCCCY1HH470J	J	47p 50V Ceramic	AA	C676	VCE9GA1EW336M	J	33 25V EL. (N.P)	AB
C301	VCCCCY1HH330J	J	33p 50V Ceramic	AA	C677	RC-FZ0374CEZZ	J	4.7 50V Plastic	AF
C302	VCCCCY1HH151J	J	150p 50V Ceramic	AA		or			
C303	VCCCCY1HH390J	J	39p 50V Ceramic	AA		RC-FZ0184CEZZ			
C307	VCCCCY1HH1R5C	J	1.5p 50V Ceramic	AD	▲△ C678	VCQPPC2JB473J	J	0.047 630V M-Poly.	AC
C308	VCKYCY1HB102K	J	1000p 50V Ceramic	AA	C680	VCFPVC2DB684J	X	0.68 200V M-Poly.	AG
C309	VCEA0A1CW337M	J	330 16V EL.	AC	C682	VCKYPA2HB102K	J	1000p 500V Ceramic	AA
C312	VCEA0A1CW476M	J	47 16V EL.	AB	△ C701	RC-FZ037SCEZZ	J	0.22 AC125V Plastic	AD
C360	VCEA0A1HW225M	J	2.2 50V EL.	AB		or			
C361	VCEA0A1HW225M	J	2.2 50V EL.	AB		RC-FZ017SCEZZ			
C364	VCEA0A1EW107M	J	100 25V EL.	AC		or			
C365	VCEA0A0JW107M	J	100 6.3V EL.	AB		RC-FZ029SCEZZ			
C368	VCEA0A1CW477M	J	470 16V EL.	AC		or			
C369	VCEA0A1CW477M	J	470 16V EL.	AC		RC-FZ012SGEZZ			
C370	VCEA0A0JW107M	J	100 6.3V EL.	AB		or			
C371	VCQYTA1HM104K	J	0.1 50V Mylar	AC		RC-FZ004SCEZZ			
C372	VCQYTA1HM104K	J	0.1 50V Mylar	AC	C702	RC-KZ0029CEZZ	J	0.01 500V Ceramic	AC
C380	VCQYTA1HM103K	J	0.01 50V Mylar	AB	C703	RC-KZ0029CEZZ	J	0.01 500V Ceramic	AC
C381	VCQYTA1HM103K	J	0.01 50V Mylar	AB	△ C705	RC-EZ0722CEZZ	J	820 200V EL.	AR
C401	VCKYCY1HB331K	J	330p 50V Ceramic	AA		or			
C402	VCCCCY1HH101J	J	100p 50V Ceramic	AA		RC-EZ0802CEZZ			
C403	VCKYCY1CB104K	J	0.1 16V Ceramic	AB	△ C706	RC-KZ0092GEZZ	J	0.0033AC250V Ceramic	AC
C404	VCEA0A1CW107M	J	100 16V EL.	AC		or			
C405	VCEA0A1CW106M	J	10 16V EL.	AB		RC-KZ0311GEZZ			
C406	VCEA0A1HW225M	J	2.2 50V EL.	AB	C707	VCFPVC3CA222H	J	2200p 1.6kV M-Poly.	AE
C408	VCEA0A1HW106M	J	10 50V EL.	AB	C708	VCCSPA1HL471J	J	470p 50V Ceramic	AA
C409	VCEA0A1HW335M	J	3.3 50V EL.	AB	C709	VCEA0A1VW107M	J	100 35V EL.	AC
C410	VCKYCY1CB104K	J	0.1 16V Ceramic	AB	C710	VCQYTA1HM821J+	X	820p 50V Mylar	AE
C411	VCEA0A1CW337M	J	330 16V EL.	AC	C717	VCKYPA2HB472K	J	4700p 500V Ceramic	AB
C412	VCKYCY1HB103K	J	0.01 50V Ceramic	AA	C722	VCQYTA1HM104K	J	0.1 50V Mylar	AC
C413	VCKYCY1HB103K	J	0.01 50V Ceramic	AA	△ C723	RC-EZ0724CEZZ	J	100 160V EL.	AG
C414	VCKYCY1HB103K	J	0.01 50V Ceramic	AA	△ C725	RC-EZ0810CEZZ	J	330 160V EL.	AH
C422	VCEA0A1CW476M	J	47 16V EL.	AB		or			
C451	VCQYTA1HM104K	J	0.1 50V Mylar	AC		RC-EZ1171CEZZ			
C452	VCEA0A1HW475M	J	4.7 50V EL.	AB	C726	VCKYPH3DB561K	J	560p 2kV Ceramic	AC
C453	VCEA0A1CW226M	J	22 16V EL.	AB	C727	VCKYPH3DB561K	J	560p 2kV Ceramic	AC
C501	VCKYPA2HB102K	J	1000p 500V Ceramic	AA	C729	VCEA0A1CW106M	J	10 16V EL.	AB
C502	VCEA0A1VW337M	J	330 35V EL.	AD	C730	VCEA4A1EN108M	J	1000 25V EL.	AD
C509	VCCSPA1HL101J	J	100p 50V Ceramic	AA	C731	RC-EZ0385CEZZ	J	1000 16V EL.	AE
C510	VCFYSA1JB564J	J	0.56 63V Mylar	AE	C732	VCKYPA2HB102K	J	1000p 500V Ceramic	AA
C511	VCKYPA2HB391K	J	390p 500V Ceramic	AA	C741	VCKYPA2HB102K	J	1000p 500V Ceramic	AA
C512	VCQYTA1HM683J	J	0.068 50V Mylar	AB	C742	VCKYPA2HB102K	J	1000p 500V Ceramic	AA
C513	VCQYTA1HM103K	J	0.01 50V Mylar	AB	C751	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C514	VCEA0A1VW107M	J	100 35V EL.	AC	C753	VCEA0A1CW107M	J	100 16V EL.	AC
C515	VCEACA1HC225J	J	2.2 50V EL.	AC	C755	VCEA0A1CW476M	J	47 16V EL.	AB
C516	VCEACA1HC105J	J	1.0 50V EL.	AB	△ C772	VCEA0A1VW477M	J	470 35V EL.	AB
C517	VCEA0A1VW108M	J	1000 35V EL.	AD	C773	VCCSPA1HL101J	J	100p 50V Ceramic	AA
C518	VCFYSA1JB473J	J	0.047 63V Mylar	AC	C801	VCQYTA1HM223K	J	0.022 50V Mylar	AB
C519	VCEA0A1HW105M	J	1.0 50V EL.	AB	C802	VCEA0A1HW474M	J	0.47 50V EL.	AB
C551	VCEACA1HC225J	J	2.2 50V EL.	AC	C803	VCCCCY1HH110J	J	11p 50V Ceramic	AA
C552	VCEA0A1HW225M	J	2.2 50V EL.	AB	C804	VCKYCY1CB104K	J	0.1 16V Ceramic	AB
C553	VCKYCY1HB102K	J	1000p 50V Ceramic	AA	C805	VCKYCY1CB104K	J	0.1 16V Ceramic	AB
C605	VCKYPA1HB102K	J	1000p 50V Ceramic	AA	C806	VCKYCY1CB104K	J	0.1 16V Ceramic	AB
C606	VCKYPA2HB561K	J	560p 500V Ceramic	AA	C807	VCCCCY1HH221J	J	220p 50V Ceramic	AA
C607	VCKYPA1HB472K	J	4700p 50V Ceramic	AA	C951	VCEA0A1CW106M	J	10 16V EL.	AB
C608	VCKYPH3DB271K	J	270p 2kV Ceramic	AC	C952	VCEA0A1CW106M	J	10 16V EL.	AB
▲△ C609	VCFPVC3ZA822H	J	8200p 1.8kV M-Poly.	AE	C954	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA
▲△ C610	VCFPVC3ZA912H	J	9100p 1.8kV M-Poly.	AE	C955	VCEA0A1CW106M	J	10 16V EL.	AB
C615	VCKYPA2HB272K	J	2700p 500V Ceramic	AA	C1401	VCCCCY1HH220J	J	22p 50V Ceramic	AA
C622	VCKYPA2HB102K	J	1000p 500V Ceramic	AA	C1402	VCFYFA1HA474J	J	0.47 50V Mylar	AC
C623	VCEA0A2CW336M	J	33 160V EL.	AE	C1403	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA
C631	VCEA0A1HW335M	J	3.3 50V EL.	AB	C1404	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C632	VCQYTA1HM103K	J	0.01 50V Mylar	AB	C1405	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA
					C1407	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA
					C1408	VCEA0A1HW106M	J	10 50V EL.	AB
					C1409	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA
					C1410	VCCCCY1HH181J	J	180p 50V Ceramic	AA

Ref. No.	Part No.	★	Description	Code	Ref. No.	Part No.	★	Description	Code
PWB-A:DUNTKA118WEX0									
MAIN UNIT (Continued)									
C1411	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA	RJ37	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA
C1412	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA	RJ38	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA
C1413	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA	RJ39	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA
C1415	VCEA0A1CW476M	J	47 16V EL.	AB	RJ42	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA
C1416	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA	RJ43	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA
C1417	VCCCCY1HH390J	J	39p 50V Ceramic	AA	RJ44	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA
C1419	VCEA0A1HW106M	J	10 50V EL.	AB	RJ45	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA
C1420	VCKYCY1HB103K	J	0.01 50V Ceramic	AA	R51	VRS-RG3AB151J+	X	150 1W M-Ox.	AE
C1421	VCCCCY1HH120J	J	12p 50V Ceramic	AA	R53	VRS-RG3DB470J+	X	47 2W M-Ox.	AE
C1423	VCCCCY1HH120J	J	12p 50V Ceramic	AA	R54	VRS-CY1JF101J	J	100 1/16W M-Ox.	AA
C1424	VCKYCY1CB104K	J	0.1 16V Ceramic	AB	R55	VRS-CY1JF101J	J	100 1/16W M-Ox.	AA
C1425	VCKYCY1CB104K	J	0.1 16V Ceramic	AB	R56	VRS-CY1JF823J	J	82k 1/16W M-Ox.	AA
C1428	VCCCCY1HH270J	J	27p 50V Ceramic	AA	R57	VRS-CY1JF392J	J	3.9k 1/16W M-Ox.	AA
C1601	VCEA0A1CW106M	J	10 16V EL.	AB	R201	VRS-CY1JF151J	J	150 1/16W M-Ox.	AA
C1602	VCCCCY1HH470J	J	47p 50V Ceramic	AA	R202	VRS-CY1JF122J	J	1.2k 1/16W M-Ox.	AA
C1603	VCCCCY1HH101J	J	100p 50V Ceramic	AA	R203	VRS-CY1JF682J	J	6.8k 1/16W M-Ox.	AA
C2001	VCCCCY1HH101J	J	100p 50V Ceramic	AA	R204	VRS-CY1JF270J	J	27 1/16W M-Ox.	AA
C2002	VCCCCY1HH101J	J	100p 50V Ceramic	AA	R205	VRS-CY1JF331J	J	330 1/16W M-Ox.	AA
C2025	VCCCCY1HH470J	J	47p 50V Ceramic	AA	R206	VRD-RA2BE121J	J	120 1/8W Carbon	AA
C2040	VCEA0A1AW107M	J	100 10V EL.	AB	R207	VRD-RA2BE4R7J	J	4.7 1/8W Carbon	AA
C2041	VCEA0A1HW105M	J	1.0 50V EL.	AB	R208	VRD-RA2BE331J	J	330 1/8W Carbon	AA
C2060	VCKYCY1CB104K	J	0.1 16V Ceramic	AB	R209	VRS-CY1JF222J	J	2.2k 1/16W M-Ox.	AA
C2061	VCCCCY1HH101J	J	100p 50V Ceramic	AA	R251	VRS-CY1JF332J	J	3.3k 1/16W M-Ox.	AA
C2062	VCEA0A1AW107M	J	100 10V EL.	AB	R252	VRS-CY1JF562J	J	5.6k 1/16W M-Ox.	AA
C2063	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA	R253	VRS-CY1JF332J	J	3.3k 1/16W M-Ox.	AA
C2201	VCKYCY1HB681K	J	680p 50V Ceramic	AA	R254	VRS-CY1JF223J	J	22k 1/16W M-Ox.	AA
C2202	VCCCCY1HH390J	J	39p 50V Ceramic	AA	R255	VRS-CY1JF563J	J	56k 1/16W M-Ox.	AA
C3001	VCE9GA1HW475M	J	4.7 50V EL. (N.P)	AB	R256	VRS-CY1JF472J	J	4.7k 1/16W M-Ox.	AA
C3002	VCKYCY1HB562K	J	5600p 50V Ceramic	AA	R257	VRS-CY1JF470J	J	47 1/16W M-Ox.	AA
C3003	VCQYTA1HM123K	J	0.012 50V Mylar	AA	R258	VRS-CY1JF472J	J	4.7k 1/16W M-Ox.	AA
C3004	VCEA0A1HW105M	J	1.0 50V EL.	AB	R259	VRS-CY1JF182J	J	1.8k 1/16W M-Ox.	AA
C3005	VCEA0A1HW475M	J	4.7 50V EL.	AB	R301	VRD-RA2BE222J	J	2.2k 1/8W Carbon	AA
C3006	VCEA0A1HW106M	J	10 50V EL.	AB	R302	VRS-CY1JF102J	J	1.0k 1/16W M-Ox.	AA
C3007	VCEA0A1HW475M	J	4.7 50V EL.	AB	R303	VRS-CY1JF103J	J	10k 1/16W M-Ox.	AA
C3008	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA	R304	VRS-CY1JF333J	J	33k 1/16W M-Ox.	AA
C3009	VCEA0A1CW227M	J	220 16V EL.	AC	R305	VRS-CY1JF102J	J	1.0k 1/16W M-Ox.	AA
C3010	VCE9GA1HW475M	J	4.7 50V EL. (N.P)	AB	R306	VRS-CY1JF152J	J	1.5k 1/16W M-Ox.	AA
C3011	VCEA0A1HW475M	J	4.7 50V EL.	AB	R360	VRD-RA2BE331J	J	330 1/8W Carbon	AA
C3012	VCE9GA1HW475M	J	4.7 50V EL. (N.P)	AB	R361	VRD-RA2BE562J	J	5.6k 1/8W Carbon	AA
C3013	VCKYCY1HB272K	J	2700p 50V Ceramic	AA	R362	VRD-RA2BE562J	J	5.6k 1/8W Carbon	AA
C3014	VCQYTA1HM473K	J	0.047 50V Mylar	AB	R363	VRS-CY1JF122J	J	1.2k 1/16W M-Ox.	AA
C3015	VCEACA1EC335J+	X	3.3 25V EL.	AF	R364	VRS-CY1JF122J	J	1.2k 1/16W M-Ox.	AA
C3016	VCE9GA1HW475M	J	4.7 50V EL. (N.P)	AB	R365	VRS-CY1JF221J	J	220 1/16W M-Ox.	AA
C3017	VCEACA1CC106J+	X	10 16V EL.	AF	R370	VRS-CY1JF221J	J	220 1/16W M-Ox.	AA
C3018	VCEA0A1HW105M	J	1.0 50V EL.	AB	R371	VRD-RA2EE3R3J	J	3.3 1/4W Carbon	AA
C3021	VCEA0A1HW475M	J	4.7 50V EL.	AB	R372	VRD-RA2EE3R3J	J	3.3 1/4W Carbon	AA
C3022	VCEA0A1HW475M	J	4.7 50V EL.	AB	R401	VRS-CY1JF682J	J	6.8k 1/16W M-Ox.	AA
C3031	VCEA0A1HW475M	J	4.7 50V EL.	AB	R402	VRS-CY1JF331J	J	330 1/16W M-Ox.	AA
C3032	VCEA0A1HW475M	J	4.7 50V EL.	AB	R403	VRS-CY1JF391J	J	390 1/16W M-Ox.	AA
RESISTORS					R404	VRS-CY1JF102J	J	1.0k 1/16W M-Ox.	AA
[M-Ox.--- Metal Oxide, M-Film--- Metal Film]					R405	VRS-CY1JF470J	J	47 1/16W M-Ox.	AA
RJ3	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA	R406	VRS-CY1JF680J	J	68 1/16W M-Ox.	AA
RJ7	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA	R407	VRS-CY1JF102J	J	1.0k 1/16W M-Ox.	AA
RJ10	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA	R408	VRS-CY1JF471J	J	470 1/16W M-Ox.	AA
RJ19	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA	R409	VRD-RA2BE562J	J	5.6k 1/8W Carbon	AA
RJ20	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA	R410	VRD-RA2BE154J	J	150k 1/8W Carbon	AA
RJ21	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA	R411	VRD-RA2BE273J	J	27k 1/8W Carbon	AA
RJ22	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA	R412	VRD-RA2BE561J	J	560 1/8W Carbon	AA
RJ23	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA	R413	VRS-CY1JF101J	J	100 1/16W M-Ox.	AA
RJ24	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA	R414	VRS-CY1JF101J	J	100 1/16W M-Ox.	AA
RJ25	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA	R415	VRS-CY1JF101J	J	100 1/16W M-Ox.	AA
RJ27	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA	R420	VRS-CY1JF332J	J	3.3k 1/16W M-Ox.	AA
RJ28	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA	R421	VRS-CY1JF152J	J	1.5k 1/16W M-Ox.	AA
RJ29	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA	R424	VRS-CY1JF102J	J	1.0k 1/16W M-Ox.	AA
RJ30	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA	R426	VRS-CY1JF182J	J	1.8k 1/16W M-Ox.	AA
RJ31	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA	R427	VRS-CY1JF182J	J	1.8k 1/16W M-Ox.	AA
RJ32	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA	R428	VRS-CY1JF182J	J	1.8k 1/16W M-Ox.	AA
RJ33	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA	R431	VRS-CY1JF330J	J	33 1/16W M-Ox.	AA
RJ35	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA	R432	VRS-CY1JF330J	J	33 1/16W M-Ox.	AA
RJ36	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA	R433	VRS-CY1JF330J	J	33 1/16W M-Ox.	AA
					R434	VRS-CY1JF101J	J	100 1/16W M-Ox.	AA
					△ R451	VRS-RG3AB103J	J	10k 1W M-Ox.	AB
					R452	VRD-RM2HD683J	J	68k 1/2W Carbon	AA
					R454	VRS-CY1JF102J	J	1.0k 1/16W M-Ox.	AA
					R456	VRS-CY1JF682J	J	6.8k 1/16W M-Ox.	AA

Ref. No.	Part No.	★	Description	Code	Ref. No.	Part No.	★	Description	Code		
PWB-A:DUNTKA118WEX0											
MAIN UNIT (Continued)											
R458	VRS-CY1JF152J	J	1.5k 1/16W	M-Ox.	AA	△ R723	VRN-RL3DBR39J+	X	0.39 2W	M-Film	AE
△ R501	VRN-RL3LB2R2J+	X	2.2 3W	M-Film	AF	R724	VRS-RG2HC332J	J	3.3k 1/2W	M-Ox.	AA
R506	VRD-RA2BE223J	J	22k 1/8W	Carbon	AA	△ R725	VRS-RG3AB182J	J	1.8k 1W	M-Ox.	AA
R510	VRD-RA2BE471J	J	470 1/8W	Carbon	AA	R726	VRD-RM2HD102J	J	1.0k 1/2W	Carbon	AA
R511	VRD-RA2BE473J	J	47k 1/8W	Carbon	AA	△ R727	VRN-RL3LB2R7J+	X	2.7 3W	M-Film	AF
R512	VRD-RA2BE683J	J	68k 1/8W	Carbon	AA	R734	VRD-RM2HD124J	J	120k 1/2W	Carbon	AA
R513	VRS-CY1JF563J	J	56k 1/16W	M-Ox.	AA	△ R737	VRN-RL3DBR56J+	X	0.56 2W	M-Film	AE
R514	VRS-CY1JF101J	J	100 1/16W	M-Ox.	AA	R751	VRS-CY1JF473J	J	47k 1/16W	M-Ox.	AA
R519	VRS-CY1JF123J	J	12k 1/16W	M-Ox.	AA	R755	VRS-RG3LB220J+	X	22 3W	M-Ox.	AF
R520	VRS-CY1JF184J	J	180k 1/16W	M-Ox.	AA	R801	VRD-RA2BE332J	J	3.3k 1/8W	Carbon	AA
R521	VRD-RM2HD152J	J	1.5k 1/2W	Carbon	AA	R802	VRS-CY1JF332J	J	3.3k 1/16W	M-Ox.	AA
R522	VRS-RG3AB102J+	X	1.0k 1W	M-Ox.	AE	R803	VRS-CY1JF222J	J	2.2k 1/16W	M-Ox.	AA
R523	VRN-RL3AB1R0J+	X	1.0 1W	M-Film	AE	R804	VRS-CY1JF222J	J	2.2k 1/16W	M-Ox.	AA
R524	VRS-RG3AB391J+	X	390 1W	M-Ox.	AE	R805	VRS-CY1JF222J	J	2.2k 1/16W	M-Ox.	AA
R525	VRS-CY1JF563J	J	56k 1/16W	M-Ox.	AA	R806	VRS-CY1JF333J	J	33k 1/16W	M-Ox.	AA
R551	VRS-CY1JF472J	J	4.7k 1/16W	M-Ox.	AA	R901	VRS-CY1JF104J	J	100k 1/16W	M-Ox.	AA
R552	VRD-RA2BE102J	J	1.0k 1/8W	Carbon	AA	R902	VRS-CY1JF104J	J	100k 1/16W	M-Ox.	AA
R553	VRS-CY1JF823J	J	82k 1/16W	M-Ox.	AA	R924	VRS-CY1JF750J	J	75 1/16W	M-Ox.	AA
R554	VRS-CY1JF183J	J	18k 1/16W	M-Ox.	AA	R925	VRS-CY1JF104J	J	100k 1/16W	M-Ox.	AA
△ R604	VRS-RG3LB332J	X	3.3k 3W	M-Ox.	AF	R926	VRS-CY1JF104J	J	100k 1/16W	M-Ox.	AA
R605	VRD-RM2HD331J	J	330 1/2W	Carbon	AA	R951	VRS-CY1JF101J	J	100 1/16W	M-Ox.	AA
R606	VRD-RM2HD271J	J	270 1/2W	Carbon	AA	R952	VRS-CY1JF101J	J	100 1/16W	M-Ox.	AA
△ R607	VRS-RG3LB332J+	X	3.3k 3W	M-Ox.	AF	R955	VRS-CY1JF101J	J	100 1/16W	M-Ox.	AA
R609	VRS-RG3AB562J+	X	5.6k 1W	M-Ox.	AE	R958	VRD-RA2BE102J	J	1.0k 1/8W	Carbon	AA
R610	VRD-RM2HD220J	J	22 1/2W	Carbon	AA	R959	VRD-RA2BE102J	J	1.0k 1/8W	Carbon	AA
△ R611	VRW-KQ41C3R3K	J	3.3 15W	Cement	AG	R961	VRD-RA2BE101J	J	100 1/8W	Carbon	AB
△ R621	VRN-VV3LB2R7J	J	2.7 3W	M-Film	AB	R962	VRD-RA2BE101J	J	100 1/8W	Carbon	AB
△ R622	VRN-RL2HCR56J+	X	0.56 1/2W	M-Film	AE	R1404	VRS-CY1JF102J	J	1.0k 1/16W	M-Ox.	AA
△ R623	VRN-RL3AB1R0J+	X	1.0 1W	M-Film	AE	R1405	VRS-CY1JF392J	J	3.9k 1/16W	M-Ox.	AA
△ R624	VRS-RG3DB332J+	X	3.3k 2W	M-Ox.	AE	R1406	VRS-CY1JF102J	J	1.0k 1/16W	M-Ox.	AA
R625	VRS-CY1JF102J	J	1.0k 1/16W	M-Ox.	AA	R1408	VRS-CY1JF821J	J	820 1/16W	M-Ox.	AA
R631	VRS-CY1JF391J	J	390 1/16W	M-Ox.	AA	R1409	VRS-CY1JF101J	J	100 1/16W	M-Ox.	AA
R632	VRS-CY1JF152J	J	1.5k 1/16W	M-Ox.	AA	R1410	VRS-CY1JF681J	J	680 1/16W	M-Ox.	AA
R633	VRS-CY1JF472J	J	4.7k 1/16W	M-Ox.	AA	R1411	VRS-CY1JF101J	J	100 1/16W	M-Ox.	AA
▲△ R651	VRN-RL2HC1R0J+	X	1.0 1/2W	M-Film	AE	R1412	VRS-CY1JF821J	J	820 1/16W	M-Ox.	AA
▲△ R652	VRD-RA2EE393J	J	39k 1/4W	Carbon	AA	R1413	VRD-RA2BE471J	J	470 1/8W	Carbon	AA
▲△ R653	VRD-RA2EE333J	J	33k 1/4W	Carbon	AA	R1414	VRS-CY1JF102J	J	1.0k 1/16W	M-Ox.	AA
▲△ R654	VRD-RA2EE184J	J	180k 1/4W	Carbon	AA	R1415	VRS-CY1JF821J	J	820 1/16W	M-Ox.	AA
▲△ R655	VRS-CY1JF104J	J	100k 1/16W	M-Ox.	AA	R1416	VRS-CY1JF122J	J	1.2k 1/16W	M-Ox.	AA
△ R658	VRS-RG3DB153J	J	15k 2W	M-Ox.	AA	R1417	VRS-CY1JF273J	J	27k 1/16W	M-Ox.	AA
R671	VRD-RA2BE222J	J	2.2k 1/8W	Carbon	AA	R1418	VRS-CY1JF153J	J	15k 1/16W	M-Ox.	AA
R672	VRD-RA2BE822J	J	8.2k 1/8W	Carbon	AA	R1419	VRS-CY1JF101J	J	100 1/16W	M-Ox.	AA
R673	VRS-CY1JF472J	J	4.7k 1/16W	M-Ox.	AA	R1420	VRS-CY1JF222J	J	2.2k 1/16W	M-Ox.	AA
R674	VRS-CY1JF472J	J	4.7k 1/16W	M-Ox.	AA	R1423	VRS-CY1JF471J	J	470 1/16W	M-Ox.	AA
R675	VRD-RA2BE102J	J	1.0k 1/8W	Carbon	AA	R1601	VRS-CY1JF101J	J	100 1/16W	M-Ox.	AA
R677	VRS-CY1JF102J	J	1.0k 1/16W	M-Ox.	AA	R1602	VRS-CY1JF103J	J	10k 1/16W	M-Ox.	AA
R679	VRS-CY1JF222J	J	2.2k 1/16W	M-Ox.	AA	R1603	VRS-CY1JF103J	J	10k 1/16W	M-Ox.	AA
R680	VRS-CY1JF822J	J	8.2k 1/16W	M-Ox.	AA	R1604	VRS-CY1JF152J	J	1.5k 1/16W	M-Ox.	AA
R681	VRS-CY1JF123J	J	12k 1/16W	M-Ox.	AA	R1605	VRS-CY1JF391J	J	390 1/16W	M-Ox.	AA
R682	VRS-CY1JF102J	J	1.0k 1/16W	M-Ox.	AA	R1606	VRS-CY1JF471J	J	470 1/16W	M-Ox.	AA
R683	VRD-RA2BE102J	J	1.0k 1/8W	Carbon	AA	R1607	VRS-CY1JF221J	J	220 1/16W	M-Ox.	AA
R684	VRS-CY1JF472J	J	4.7k 1/16W	M-Ox.	AA	R1608	VRS-CY1JF681J	J	680 1/16W	M-Ox.	AA
R685	VRD-RA2BE562J	J	5.6k 1/8W	Carbon	AA	R1609	VRS-CY1JF122J	J	1.2k 1/16W	M-Ox.	AA
R686	VRD-RA2EE222J	J	2.2k 1/4W	Carbon	AA	R2001	VRD-RA2BE562J	J	5.6k 1/8W	Carbon	AA
R687	VRS-CY1JF103J	J	10k 1/16W	M-Ox.	AA	R2002	VRS-CY1JF103J	J	10k 1/16W	M-Ox.	AA
△ R688	VRN-RL3DB3R3J+	X	3.3 2W	M-Film	AE	R2004	VRD-RA2BE473J	J	47k 1/8W	Carbon	AA
R689	VRS-CY1JF274J	J	270k 1/16W	M-Ox.	AA	R2006	VRS-CY1JF103J	J	10k 1/16W	M-Ox.	AA
△ R690	VRS-RG3LB561J+	X	560 3W	M-Ox.	AF	R2007	VRD-RA2BE223J	J	22k 1/8W	Carbon	AA
△ R691	VRG-RL2HB101J	J	100 1/2W	M-Film	AB	R2008	VRD-RA2BE333J	J	33k 1/8W	Carbon	AA
△ R701	RR-DZ0049CEZZ	J	3.9M 1/2W	Solid	AB	R2009	VRD-RA2BE102J	J	1.0k 1/8W	Carbon	AA
	or					R2010	VRS-CY1JF102J	J	1.0k 1/16W	M-Ox.	AA
	RR-HZ0048CEZZ					R2012	VRS-CY1JF471J	J	470 1/16W	M-Ox.	AA
△ R702	VRW-KQ4AC1R2K	J	1.2 10W	Cement	AE	R2020	VRS-CY1JF223J	J	22k 1/16W	M-Ox.	AA
△ R703	VRS-RG3LB101J	J	100 3W	M-Ox.	AC	R2023	VRD-RA2BE223J	J	22k 1/8W	Carbon	AA
R704	VRD-RM2HD154J	J	150k 1/2W	Carbon	AA	R2024	VRD-RA2BE682J	J	6.8k 1/8W	Carbon	AA
△ R705	VRN-RL3DBR22J	J	0.22 2W	M-Film	AA	R2025	VRD-RA2BE682J	J	6.8k 1/8W	Carbon	AA
△ R706	VRN-RL3DBR22J	J	0.22 2W	M-Film	AA	R2026	VRD-RA2BE682J	J	6.8k 1/8W	Carbon	AA
R707	VRS-RG2HC681J	J	680 1/2W	M-Ox.	AA	R2027	VRD-RA2BE682J	J	6.8k 1/8W	Carbon	AA
R709	VRN-GA2EB1R0J	J	1.0 1/4W	M-Film	AA	R2028	VRD-RA2BE102J	J	1.0k 1/8W	Carbon	AA
R710	VRD-RM2HD470J	J	47 1/2W	Carbon	AA	R2031	VRS-CY1JF103J	J	10k 1/16W	M-Ox.	AA
R711	VRD-RA2BE222J	J	2.2k 1/8W	Carbon	AA	R2032	VRD-RA2BE103J	J	10k 1/8W	Carbon	AA
△ R715	VRS-RG3DB153J	J	15k 2W	M-Ox.	AA	R2033	VRD-RA2BE223J	J	22k 1/8W	Carbon	AA
						R2040	VRS-CY1JF102J	J	1.0k 1/16W	M-Ox.	AA
						R2041	VRS-CY1JF333J	J	33k 1/16W	M-Ox.	AA
						R2042	VRS-CY1JF101J	J	100 1/16W	M-Ox.	AA
						R2043	VRS-CY1JF333J	J	33k 1/16W	M-Ox.	AA

Ref. No.	Part No.	★	Description	Code	Ref. No.	Part No.	★	Description	Code
PWB-A:DUNTKA118WEX0									
MAIN UNIT (Continued)									
R2044	VRS-CY1JF682J	J	6.8k 1/16W M-Ox.	AA	RDA361	PRDAR5006MEFW	X	Heat Sink, for IC361	AE
R2045	VRS-CY1JF101J	J	100 1/16W M-Ox.	AA	RDA501	PRDAR0234PEFW	R	Heat Sink, for IC501	AH
R2046	VRD-RA2BE101J	J	100 1/8W Carbon	AB	RDA601	PRDAR0150PEFW	R	Heat Sink, for Q602	AL
R2047	VRS-CY1JF221J	J	220 1/16W M-Ox.	AA	RDA671	PRDAR1007MEFW	J	Heat Sink, for Q673	AH
R2048	VRS-CY1JF562J	J	5.6k 1/16W M-Ox.	AA	RDA701	PRDAR1006MEFW	J	Heat Sink, for IC701	AH
R2060	VRS-CY1JF221J	J	220 1/16W M-Ox.	AA	RDA750	PRDAR5072CEFW	J	Heat Sink, for IC751	AC
R2061	VRS-CY1JF562J	J	5.6k 1/16W M-Ox.	AA	TAN921	QTANJ0339CEZZ	X	AV Terminal	AG
R2062	VRS-CY1JF183J	J	18k 1/16W M-Ox.	AA		LX-BZ3049GEFD	J	Screw	AA
R2063	VRS-CY1JF222J	J	2.2k 1/16W M-Ox.	AA		LX-HZ3007MEFD	X	Screw	AB
R2064	VRD-RA2BE332J	J	3.3k 1/8W Carbon	AA					
R2068	VRS-CY1JF103J	J	10k 1/16W M-Ox.	AA					
R2070	VRS-CY1JF103J	J	10k 1/16W M-Ox.	AA					
R2071	VRS-CY1JF102J	J	1.0k 1/16W M-Ox.	AA					
R2072	VRD-RA2BE102J	J	1.0k 1/8W Carbon	AA					
R2101	VRS-CY1JF101J	J	100 1/16W M-Ox.	AA					
R2102	VRS-CY1JF101J	J	100 1/16W M-Ox.	AA					
R2201	VRD-RA2BE222J	J	2.2k 1/8W Carbon	AA					
R2202	VRS-CY1JF103J	J	10k 1/16W M-Ox.	AA					
R2203	VRD-RA2BE184J	J	180k 1/8W Carbon	AA					
R2211	VRD-RA2BE222J	J	2.2k 1/8W Carbon	AA					
R2212	VRS-CY1JF682J	J	6.8k 1/16W M-Ox.	AA					
R2213	VRS-CY1JF333J	J	33k 1/16W M-Ox.	AA					
R2401	VRS-CY1JF101J	J	100 1/16W M-Ox.	AA					
R2402	VRS-CY1JF101J	J	100 1/16W M-Ox.	AA					
R2403	VRS-CY1JF101J	J	100 1/16W M-Ox.	AA					
R2404	VRS-CY1JF101J	J	100 1/16W M-Ox.	AA					
R2507	VRS-CY1JF823J	J	82k 1/16W M-Ox.	AA					
R3001	VRD-RA2BE221J	J	220 1/8W Carbon	AA					
R3002	VRD-RA2BE221J	J	220 1/8W Carbon	AA					
R3003	VRS-CY1JF105J	J	1.0M 1/16W M-Ox.	AA					
R3004	VRS-CY1JF104J	J	100k 1/16W M-Ox.	AA					
R3005	VRS-CY1JF623J	J	62k 1/16W M-Ox.	AA					
R3007	VRS-CY1JF332J	J	3.3k 1/16W M-Ox.	AA					
R3008	VRS-CY1JF302J	J	3.0k 1/16W M-Ox.	AA					
R3010	VRS-CY1JF392J	J	3.9k 1/16W M-Ox.	AA					
R3011	VRS-CY1JF102J	J	1.0k 1/16W M-Ox.	AA					
R3012	VRS-CY1JF102J	J	1.0k 1/16W M-Ox.	AA					
R3017	VRD-RA2BE102J	J	1.0k 1/8W Carbon	AA					
R3018	VRD-RA2BE102J	J	1.0k 1/8W Carbon	AA					
SWITCH									
S502	QSW-B0015CEZZ	J	Vertical Center	AC					
MISCELLANEOUS PARTS									
△ RY701	RRLYJ0081CEZZ	J	Relay	AL					
	or								
	RRLYJ0094CEZZ								
△ F701	QFS-B5023CEZZ	J	Fuse, 5A-AC125V	AC					
FB601	RBLN-0047CEZZ	J	Ferrite Bead	AB					
FB671	RBLN-0047CEZZ	J	Ferrite Bead	AB					
FB701	RBLN-0091GEZZ	J	Ferrite Bead	AB					
	or								
	RBLN-0037CEZZ								
FB702	RBLN-0090GEZZ*	X	Ferrite Bead	AE					
	or								
	RBLN-0036CEZZ								
FB704	RBLN-0091GEZZ	J	Ferrite Bead	AB					
FB706	RBLN-0091GEZZ	J	Ferrite Bead	AB					
FH701	QFSDH1013CEZZ	J	Fuse Holder	AC					
FH702	QFSDH1014CEZZ	J	Fuse Holder	AC					
P351	QPLGN0461CEZZ	J	Plug, 4-pin(S)	AB					
P401	QPLGN0561CEZZ	J	Plug, 5-pin(GBN)	AB					
P601	QPLGN0161FJZZ	J	Plug, 6-pin(K)	AE					
P621	QPLGN0461CEZZ	J	Plug, 4-pin(YBN)	AB					
P651	QPLGN0361CEZZ	J	Plug, 3-pin(P651-3)	AB					
P701	QPLGN0460CEZZ	J	Plug, 4-pin(M)	AC					
	or								
	QPLGN0404CEZZ								
P703	QPLGN0269GEZZ	J	Plug, 2-pin(P)	AB					
P901	QPLGN0661CEZZ	J	Plug, 6-pin(EJ)	AD					
P2002	QPLGN0461CEZZ	J	Plug, 4-pin(YR)	AB					
P2401	QPLGN0561CEZZ	J	Plug, 5-pin	AB					

Ref. No.	Part No.	★	Description	Code	Ref. No.	Part No.	★	Description	Code
PWB-B:DUNTKA118WEV0									
CRT UNIT									
TRANSISTORS									
Q850	VS2SC4544LB2E	J	2SC4544LB	AD	R885	VRD-RA2BE221J	J 220	1/8W Carbon	AA
Q851	VS2SC4544LB2E	J	2SC4544LB	AD	R886	VRD-RA2BE471J	J 470	1/8W Carbon	AA
Q852	VS2SC4544LB2E	J	2SC4544LB	AD	R887	VRD-RA2BE471J	J 470	1/8W Carbon	AA
Q853	VS2SC3198-Y-1	J	2SC3198-Y	AA	R888	VRD-RA2BE471J	J 470	1/8W Carbon	AA
Q854	VS2SC3198-Y-1	J	2SC3198-Y	AA	R891	VRD-RA2BE561G	J 560	1/8W Carbon	AE
Q855	VS2SC3198-Y-1	J	2SC3198-Y	AA	R892	VRD-RA2BE331G	J 330	1/8W Carbon	AE
Q894	VS2SA1266-Y-1	J	2SA1266-Y	AA	R894	VRD-RA2BE152J	J 1.5k	1/8W Carbon	AA
					R895	VRD-RA2EE561J	J 560	1/4W Carbon	AA
DIODES					MISCELLANEOUS PARTS				
You can substitute "RH-DX0475CEZZ" for "VHD1SS119//-1".					P860	QPLGN0461CEZZ	J	Plug, 4-pin(YBN)	AB
D850	VHD1SS119//-1	J	Diode	AB	P880	QPLGN0561CEZZ	J	Plug, 5-pin(GBN)	AB
D851	VHD1SS119//-1	J	Diode	AB	SC802	QSOCV1011CEZZ	J	CRT Socket	AF
D852	VHD1SS119//-1	J	Diode	AB					
D894	VHD1SS119//-1	J	Diode	AB					
D895	VHD1SS119//-1	J	Diode	AB					
D896	RH-EX0616GEZZ	J	Zener Diode, 5.6V	AA					
or									
	RH-EX0298CEZZ								
D897	VHD1SS119//-1	J	Diode	AB					
D898	VHD1SS119//-1	J	Diode	AB					
COILS									
L852	VP-MK221K0000	J	Peaking 220μH	AB					
L853	VP-MK221K0000	J	Peaking 220μH	AB					
L854	VP-MK221K0000	J	Peaking 220μH	AB					
CAPACITORS									
<i>[EL.... Electrolytic]</i>									
C850	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA					
C851	VCEA0A1CW476M	J	47 16V EL.	AB					
C876	VCCSPA1HL561J	J	560p 50V Ceramic	AA					
C877	VCCSPA1HL471J	J	470p 50V Ceramic	AA					
C878	VCCSPA1HL561J	J	560p 50V Ceramic	AA					
C880	RC-KZ018JCEZZ	J	0.01 3kV Ceramic	AC					
C892	VCEA0A1CW106M	J	10 16V EL.	AB					
C893	VCEA0A1CW106M	J	10 16V EL.	AB					
C895	VCEA0A1CW226M	J	22 16V EL.	AB					
RESISTORS									
<i>[M-Ox.... Metal Oxide]</i>									
R842	VRD-RM2HD104J	J	100k 1/2W Carbon	AA					
R849	VRD-RA2BE181J	J	180 1/8W Carbon	AA					
R850	VRD-RA2BE561J	J	560 1/8W Carbon	AA					
R851	VRD-RA2BE561J	J	560 1/8W Carbon	AA					
R852	VRD-RA2BE561J	J	560 1/8W Carbon	AA					
R854	VRD-RA2BE181J	J	180 1/8W Carbon	AA					
R855	VRD-RA2BE181J	J	180 1/8W Carbon	AA					
R856	VRD-RA2BE121J	J	120 1/8W Carbon	AA					
R857	VRD-RA2BE121J	J	120 1/8W Carbon	AA					
R858	VRD-RA2BE121J	J	120 1/8W Carbon	AA					
△ R859	VRS-VV3DB273J	J	27k 2W M-Ox.	AA					
△ R860	VRS-VV3DB273J	J	27k 2W M-Ox.	AA					
△ R861	VRS-VV3DB273J	J	27k 2W M-Ox.	AA					
△ R862	VRS-VV3DB273J	J	27k 2W M-Ox.	AA					
△ R863	VRS-VV3DB273J	J	27k 2W M-Ox.	AA					
△ R864	VRS-VV3DB273J	J	27k 2W M-Ox.	AA					
R868	VRD-RM2HD224J	J	220k 1/2W Carbon	AA					
R870	VRD-RA2BE471J	J	470 1/8W Carbon	AA					
R871	VRD-RA2BE471J	J	470 1/8W Carbon	AA					
R872	VRD-RA2BE471J	J	470 1/8W Carbon	AA					
R873	VRD-RA2BE220J	J	22 1/8W Carbon	AA					
R874	VRD-RA2BE220J	J	22 1/8W Carbon	AA					
R875	VRD-RA2BE220J	J	22 1/8W Carbon	AA					
R876	VRD-RA2BE121J	J	120 1/8W Carbon	AA					
R877	VRD-RA2BE121J	J	120 1/8W Carbon	AA					
R878	VRD-RA2BE121J	J	120 1/8W Carbon	AA					
R880	VRC-MA2HG332K	J	3.3k 1/2W Solid	AA					
R881	VRC-MA2HG332K	J	3.3k 1/2W Solid	AA					
R882	VRC-MA2HG332K	J	3.3k 1/2W Solid	AA					
R883	VRD-RA2BE221J	J	220 1/8W Carbon	AA					
R884	VRD-RA2BE221J	J	220 1/8W Carbon	AA					

Ref. No.	Part No.	★	Description	Code
PWB-F:DUNTKB023WEA0				
CONTROL UNIT				

CAPACITOR*[EL... Electrolytic]*

C4001	VCEA0A1HW475M	J	4.7	50V	EL.	AB
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RESISTORS

R4001	VRD-RA2BE103J	J	10k	1/8W	Carbon	AA
R4003	VRD-RA2BE273J	J	27k	1/8W	Carbon	AA
R4004	VRD-RA2BE563J	J	56k	1/8W	Carbon	AA
R4005	VRD-RA2BE331J	J	330	1/8W	Carbon	AA
R4006	VRD-RA2BE563J	J	56k	1/8W	Carbon	AA
R4007	VRD-RA2BE123J	J	12k	1/8W	Carbon	AA
R4008	VRD-RA2BE750J	J	75	1/8W	Carbon	AA
R4009	VRD-RA2BE153J	J	15k	1/8W	Carbon	AA
R4010	VRD-RA2BE272J	J	2.7k	1/8W	Carbon	AA

SWITCHES

S4001	QSW-K0202PEZZ	R	Power			AC
S4002	QSW-K0202PEZZ	R	CH-up			AC
S4003	QSW-K0202PEZZ	R	CH-down			AC
S4004	QSW-K0202PEZZ	R	VOL-up			AC
S4005	QSW-K0202PEZZ	R	VOL-down			AC

MISCELLANEOUS PARTS

J4001	QJAKG0101GJZZ	X	Video/Audio Terminal			AH
P4003	QPLGN0661CEZZ	J	Plug, 6-pin(EJ)			AD
P4004	QPLGN0461CEZZ	J	Plug, 4-pin(YR)			AB
RMC4001	RRMCU0222CEZZ	J	R/C Receiver			AL
	or					
	RRMCU0235CEZZ					
	QCNW-0176MEZZ	X	Connecting Cord(YR)			AH
	QCNW-0179MEZZ	X	Connecting Cord			AM

MISCELLANEOUS PARTS

△ ACC701	QACCD3065CESA	J	AC Cord			AN
SP1	VSP1206PB396E	X	Speaker(L), 6 ohm			AQ
SP2	VSP1206PB396E	X	Speaker(R), 6 ohm			AQ
	LANGB0102GJFW	X	Fixing Metal			AH
	LCHSM0008MEK0	X	Chassis Frame			AQ
	LHLDK0014PEZZ	R	AC Cord Holder			AD
	LHLDW1009PEZZ	R	Holder, x2			AA
	LHLDW1033PEZZ	R	Holder, x6			AA
	LHLDW1060PEZZ	R	Holder			AA
	LHLDZ1004GJZZ	X	Holder			AD
	LHLDZ1037MEZZ	X	HV Holder			AD
	LX-TZ0104GJFD	X	Screw			AF
	LX-TZ3004CEFD	J	Screw, for Speaker, x4			AA
	LX-TZ3011CEFD	J	Screw, x2			AA
	LX-WZ3006MEFD	X	CRT Washer, x4			AD
	LX-WZ3013MEFD	X	CRT Washer, x4			AD
	QCNW-0143MEZZ	X	Connecting Cord(S)			AK
	QCNW-0144MEZZ	X	Connecting Cord			AG
	QCNW-0145MEZZ	X	Connecting Cord			AE
	TCAUH3048GJZZ	X	Caution Card			AD
	TLABM0002GJZZ	X	Model Label			AB
	XTASD30P12000	J	Screw			AA
	XTASD40P20000	J	Screw			AA

SUPPLIED ACCESORRIES

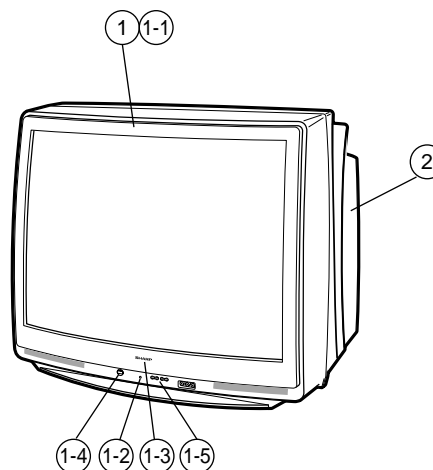
RRMCG1324CESA	J	Infrared R/C Unit	AT
TGAN-0001GJZZ	X	Guarantee Card	AB
TINS-7509GJZZ	X	Operation Manual	AH

PACKING PARTS
(NOT REPLACEMENT ITEM)

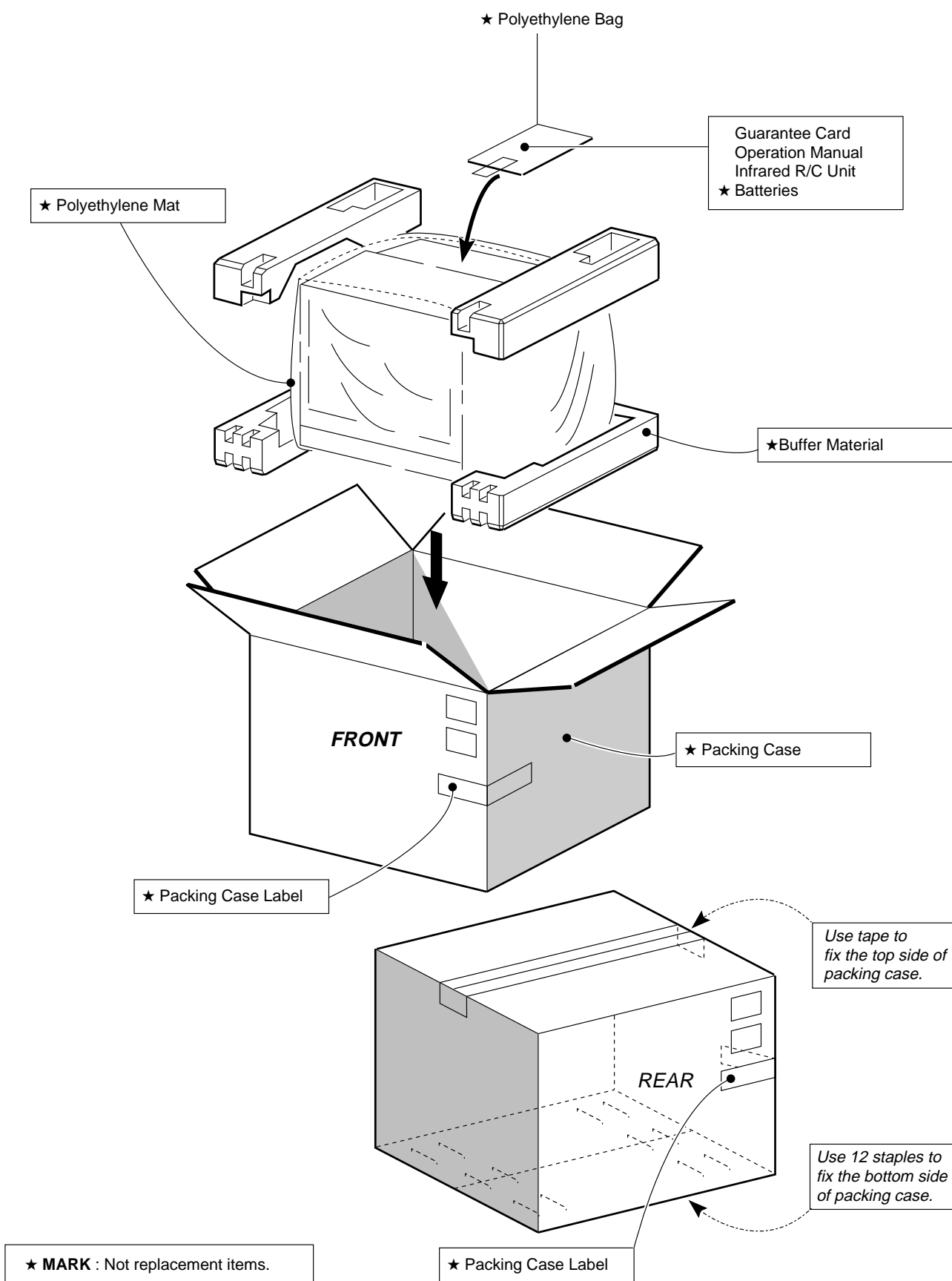
SPAKC0239GJZZ	-	Packing Case	—
SPAKP0113GJZZ	-	Polyethylene Mat	—
SPAKX0129GJZZ	-	Buffer Material	—
SSAKA0101GJZZ	-	Polyethylene Bag	—
TLABZ0160GJZZ	-	Packing Case Label, x2	—

CABINET PARTS

1	CCABA0162WEH0	X	Front Cabinet Ass'y	BM
1-1	<i>Not Available</i>	-	Front Cabinet	—
1-2	GCOVA0119GJKA	X	Cover for R/C	AF
1-3	HBDGB1009MESA	X	Badge, "SHARP"	AG
1-4	JBTN-0119GJKA	X	Button, Power	AG
1-5	JBTN-0123GJKA	X	Button, Vol-up/down, CH-up/down, Menu	AQ
2	GCABB0119GJKA	X	Rear Cabinet	BF



PACKING OF THE SET



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